# The Iron A

#### A Review of the Hardware and Metal Trades.

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#### Channel.

The French Assembly having voted affirmatively upon the opening of this stupendous enterprise, the London papers received by the latest mail contain diagrams, charts, and particulars relative to the proposed tunnel, which may prove interesting to our readers. The submarine railway will have a length of twenty-two miles between the English and French shores. It will have to be cut through a bed of chalk, which is upward of 500 feet deep on each shore from it stretches without interruption beneath the

On the line of the tunnel the depth of water at high tide nowhere exceeds 180 feet, so that, were Westminster Abbey to be sunk in the deepest part, its towers would project 45 feet above the surface of the water. As at present planned, there will nowhere be less than 200 feet of strata above the tunnel, and this will allow the railway approaches to be formed with a gradient of about 1 foot in 80. From the bottom of the descent on either side the tunnel will, for the purposes of drainage, slope upward toward the center at on inclina-

tion of 1 foot in 2640. The boring in St. Margaret's Bay was commenced at the beginning of 1866, and was completed in 1868. It was carried through the chalk and into the green sand, which was reached at a depth of 540 feet below high water. The boring on the French coast was commenced in March, 1866, and was continued to a point in the lower or gray chalk, about 520 feet is ascertained by the below high water. At the same time that portion of the bottom of the channel lying between the chalk cliffs on each shore was carefully examined. The principal, practical and useful results that the borings have determined But the results are unare, that on the proposed line of the tunnel the depth of the chalk on the English coast is 470 feet below high water, consisting of 175 feet of upper or white chalk, and 295 feet of lower or gray chalk; and that on the French coast the depth of the chalk is 750 feet below high water, consisting or 270 feet of upper or white chalk, and 480 feet of lower or gray chalk. It also appears probable that there is no great fault or serious interruption in the continuity or regularity of the strata between the two shores on the proposed line of tunnel. On the completion of the tunnel, a double line of rails will be laid down in it, and trains will run from Dover to Calais without any intermediate atoppages. It will be possible, then, to go from London to Constantinople without changing cars, and very soon, too, as far as Calcutta. About 300,000 passengers cross every year the channel between Dover and Calais. It is calculated that, when the horrors of that sickly and too celebrated sea passage shall give place to an easy traveling in railroad, 1,000,000 persons will cross between England and France,

The boring machine to be used in excavating the tunnel is shown in the accompanying illustration. It will be driven by steam or compressed air, as may be found most advantageous and economical. We shall give our readers a fuller description of the manner of its operation

which will bring large dividends to the Tunnel

#### Phosphorus Steel Making.

cast metal. This metal, says M. Gautier, cantion that it is nearly deprived of carbon, consequently every process which will yield extra soft steel will, with inferior materials, produce

phosphorus cast metal. I. THE BESSEMER PROCESS .- 1. The Ferromanganese Process practiced at Terre Noire.—The silicious pig iron used contains but little manganese: the first stage, that which precedes the appearance of the yellow ray in the spectroing to the richness of the pig iron ir silicium. There is no explosion, the dame is pure, without smoke; the completion of the operation is positively marked by the disappearance of all the rays of the spectroscope with the single production of extra soft metal the refining is prolonged for about twenty seconds, the blast is stopped, and the converter is laid on its side. Manganese iron, previously heated to redness, is then thrown in by means of shovels, taking enter the metal. The manganese fron used is

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the method also which is adopted at the Seraing followed at Zwickau and Maxhutte, supplies a ciples. works, with the same manganese iron.

Pig Iron.—The pig iron used is without silicium, duce phosphorus into cast steel on condition of owing to abundant and superior material, and but rich in manganese; the proportion running climinating the carbon, and the less the amount from 4 to 5 per cent. The character of the of the latter the greater may be that of the operation is such that there is not what is called former. Practically by the German method, a first period; the yellow ray appears at once. which is really but that of Fagersta applied to There are abundant explosive projections, which less pure materials, metal is produced which would render the process ruinous if care were may almost be said to be without carbon, and, not taken to have enormous converters relative as no spiegel is introduced, there is no element is upward of 500 feet deep on each shore from high-water mark, and the investigations lead to the conclusion that it is continuous, and that the conclusion that it is continuous, and that the conclusion that the mental threated. The flame is veiled by smoke and gases, the principal of which is oxide of manganese. It is difficult to control the operation, for if the temperature be converted to the element of recarburation. It is not, then, astonishing that the metal thus obtained should be perfectly malleable and yet contain a notable proportion to the element of recarburation. It is not, then, astonishing which is oxide of manganese. It is difficult to control the operation, for if the temperature be reduced by additions of small quantities of of phosphorus, that is to say in proportion to steel and iron, the object is not attained, for the the formerly admitted amount of 1 millieme 8, heat must be retained in order to keep the metal which is only half the quantity which may be surface, for no addition is made of spiegel. The iron. work is carried on

blindfolded, for the intermittent flashes of flame are blinding, the heat caused by the explosions is annoying, and the spectroscope is misleading. From time to time samples of the scoria have to be drawn to find how matters are proceeding; after a certain amount of experience, behavior of metallic globules under the hammer, and from the color of the scoria. certain, and have to be classified. The ingots, moreover, are liable to shrink and to become flawed. This mode is adopted at Fagersta, in Sweden; at Zwick au, in Saxony, and Maxhutte, in Bavaria; but it requires all the value that attaches to the production of exduce any one to continne a method so uncertain.

3. English Method, that of Spiegeleisen by Explosion .- In this process, silicious pig, such as that of Cumberland, for example, is employed, and the operation is carried considerably beyond complete decarbura-In order to suc tion. ceed, a certain quantity of oxide of iron,

neither more nor less, must be produced in the bath, and which carries off by explosion the carbon of the spiegeleisen which is added. This instantaneous production of oxide of carbon is dangerous, appears to them the more advantageous for the ceived. production of phosphorous steel with pig iron of second quality. M. Gartier adds: The Bes- Mr. Harriss-Gastrell stated that all of the estabsemer process is destined to lose much of its lishments in this country engaged in making importance in presence of the certain and un- machinery expended \$21,405,673 for materials limited extension of the Martin-Siemens process, which he considers will take the lead in 36.194 boilers, 7677 stationary engines, 1137 lofuture, and regulate prices. It is capable of comotives, 3150 pegging machines, 6549 cider using up old iron, and employing almost all mills, 6060 cotton gins and presses, 1211 grist ope, lasts about a quarter of an hour, accord- kinds of ore, for puddling is still the only mills, 6981 lathes, 6552 steam pumps, 2456 saw known method of practically getting rid of the mills, etc., bringing the value of all their progreater part of the sulphur and phosphorus, ducts from \$51,887,266 to \$138,519,246 in a sinwhile the Bessemer process, requiring silicious gle decade. The proportion of Pennsylvania pig iron containing little sulphur, must always was \$29,258,153; of New York, \$20,962,058; of ature. He found that when a plate of iron is be of a limited application. The true mode of Ohio, \$11,334,489. The later increase has probattacked by dilute sulphuric acid, the hydroexception of the yellow sodium ray. For the making phosphorus steel is then in the sole ably been in a fair proportion to this. At all gen is in part absorbed by the metal, and that,

furnace. produce extra soft metal there is but one way. that is to say, to act chemically upon the oxide care that the pieces pass through the scoria and of iron in the bath. Manganese iron must be resorted to, as spiegel always gives hard proan alloy containing a little carbon; the man-ducts; the proportion is the same as in the Brazil, and of other articles of the same nature account of his observations: ganese in it reduces the oxide of iron in the Bessemer process, namely, 1 per cent. of the to Australia, Peru, Turkey, Japan, Great Britain converter and the greater part of the carbon is whole, or about 2 per cent. of manganese iron and elsewhere. The recent exposition of the

striking confirmation of the fundamental prop-2. Swedish Method, with highly Manganiferous erties of phosphorous steel; you may intro-

in such extreme fluidity as will permit the tolerated in a truly soft steel, when produced oxide of iron to separate itself and arrive at the in a Martins-Siemens furnace with manganese

BORING MACHINE FOR THE CHANNEL TUNNEL.

The manufacture of machinery, and particu-

In his valuable report to Parliament last year, in 1860, and \$60,423,642 in 1870; and produced without bubbles or other irregularities; and, without bubbles or other irregularities; and, which is of essential importance, the productis run off.

The Proposed Tunnel Under the English always equal and regular in practice. This is An account, by M. Greiner, of the process ranted by the strongest and most enduring prin-

This point has been attained from a very brought unwonted native abilities where they were appreciated. The attainment in all of its ceived. It has enabled hundreds to do the work of thousands, and to do it better than it could be done otherwise. It has attracted population, employed and rewarded capital as well as labor, and created markets as well as supplied them. There is no department of business so simple or so complicated that has not shared something from this source, and the political strength of the nation has drawn

This advance, so creditable, valuable and remunerative, that blends intellectual with physical vigor, and touches every point of use-great as it has been-has not

been exclusively ours. The competition of the world is now for mechanical superiority, and the tendency to this end has stimulated the ability of

Whatever land can of any kind, at the lowest price, comwealth and of influence in its affairs. The fact bars indolence and forces new competition. In this we have the encouragement drawn from signal past achievements, extending into the present; the same by scientific and technical tuition; the possession of such amounts of coal, of iron, and other metals wood, and textiles of every kind as no other abundant food at low prices. We have opened some foreign ports to the products of our mechanical skill shown in its manufactures—some to the machinery itself. The export of the latter does not include the ability to use it most efficiently-certainly not to improve it, and this constant superiority, sprung from do-

mestic ability, must be relied upon to retain the best offices of success.

We are now at a stage when every domestic larly that intended for other fabrications, and foreign reason conspires to command more a part of the metal, and sometimes the whole though confined chiefly to Pennsylvania, New respect for mechanical ability. A world of M. F. Gautier, engineer of mines, France, charge, being projected out of the converter York, Massachusetts and Ohio, has attained material and every opportunity and the utmost useful sketch of the various and endangering the operator and his men. such an amount, and been attended by so many need are useless without the skill and energy methods for producing phosphorous steel, or, Generally, the product is soft, but it is lia- improvements and so many important discov- for their employment. The great Exposition to use a more correct definition, phosphorus ble to flaws, which are not much felt in sheet eries, and is still gaining so much in every way, next year will show what we have done on a iron, but which unfits it for rails. Steel makers and promises such serious results, that it is grand scale, and will disclose what has been not be employed in industry except on condi- will choose which ever of these three methods entitled to more consideration than it has re- done elsewhere. Studying this, a chart can be drawn for future effort, and in the display statesmanship will be able to apprehend national possibilities, near and vast, that must be considered. For from this time mechanical superiority must be sought until it is securely held. With our possessions every other ad vantage follows this .- Phila. North American.

#### Hydrogenized Iron.

Some time ago, M. Cailletet described to the French Academy experiments on the passage of hydrogen through iron at ordinary temperevents, the Baldwin Locomotive Works, of if a system be employed, consisting of two II. THE MARTIN-SIEMENS PROCESS.-In this Philadelphia, exported 44 engines, valued at iron plates, soldered edge to edge, the tension method the matter is more simple. In order to \$568,096.94, in 1872, and raised the number to of hydrogen which accumulates in this appar 99, valued at \$1,432,800 27, last year. We have atus will equilibrate a column of mercury 0.35 remarked the export of gas fixtures to St. Pe- m. in hight. The author has been prosecuting tersburg; of carriages to India; of sewing ma- his researches further as to the association of chines over the world; of sugar machinery to iron and hydrogen. The following is a short

On decomposing, by means of a battery, a

which is found to be pure hydrogen.

In free air the galvanic iron loses only a part small beginning, and despite great difficulties, of the hydrogen it contains. A specimen. weighing 0.90 gr., kept fifteen days in an open particularly to the skill of those employed, who tube, gave, when heated, 18 cubic centimeters of gas, or more than half the quantity which it contained at the moment of its preparation. stages has ministered more gain than it has re- If you put a fragment of hydrogenized iron into a glass filled with water heated to 60' or 70°, the liberation of gas becomes tumultuous, and there is often intense crackling.

M. Cailletet examined a great number of specimens of iron, obtained in solutions more or less dilute, and reduced by currents of diffent intensity, as to the total quantity of gas they contained. For this purpose the metal was heated in the vacuum of a mercury pump, and the gas given off was measured. agreement in the numbers was very great. Thus, he found for one volume of iron-I., 248; II., 235.80; III., 236.90; IV., 244.85 vol umes of hydrogen. If you bring a piece of hydrogenized iron near a body in ignition, the liberated hydrogen burns, and the metal is sheathed in a light flame, similar to that of a wick dipped in alcohol.

When the iron has lost by heat the hydrogen it contained, the gas cannot be restored to it. Using as negative electrode in a voltameter a other countries as well plate of galvanic iron previously heated, the author found bydrogen of the decomposed water liberated abundantly on the metal; but the manufacture the best plate did not take up hydrogen, even though the battery was in action several hours. (Thus iron is not comparable to palladfum, which ocmands so much and cludes, as Graham has proved, a quantity of more of the world's hydrogen, that may be removed and restored a great number of times). Galvanic fron can be easily pulverized; but, after heating, it resumes a certain ductility.

Hydrogen, uniting with iron, communicates to it a considerable coercive force. A wire of platinum, coated with galvanic iron, was placed in the axis of a magnetic needle, oscillating on a pivot, and at a fixed distance from one of its extremities. The needle, drawn from its position of equilibrium, oscilated twenty-six times native ability, trained in a minute. The iron having been magnetized and replaced at the same distance from the needle, the latter made forty-two oscillations in the same time. Heated to a red heat, the ire n lost its poles. When magnetized anew to saturation, it made the needle oscillate only thirtyand minerals and three times in a minute. If we suppose that the magnetic forces of the iron in these three states were to each other as the squares of the country enjoys, and number of oscillations, and take as unit the magnetic force of hydrogenized iron not magnetized, we have, for the magnetized hydrogenized iron, 2.609, and for the iron deprived of hydrogen and magnetized, 1.610. Thus the presence of hydrogen in iron, modifies greatly the magnetic properties of that metal. Owing to the numerous gas bubbles given off by hydrogenized iron the author did not succeed in obtaining its density. After expulsion of hy-drogen the density of iron is 7:302 (mean of three observations).

The various specimens of iron M. Cuilletet examined contained, for one gramme of iron, 32-80 cubic centimeters of hydrogen, or, for one equivalent of iron, 0 950 gr., which corresponds to the formula Fe12H, if the association of the two bodies be considered as a definite compound; but the author thinks rather that the hydrogen, in uniting with the iron, plays a communicating to it, as has been seen, a great hardness and considerable coercive force

results are important in connection with the facts brought to light by Graham, of occlusion of hydrogen by palladium, the researches of MM. Sainte Claire Deville and Troost on passage of hydrogen through homegeneous solid bodies, and those of MM. Troost and Hautefeuille on combinations of hydrogen with the alkaline metals.

How to Use a Grindstone. -- Common grindstone spindles, with a crank at one end, are open to the great objection that the stone will never keep round, because every person is inclined, more or less, to follow the motion of his foot with his hand, which causes the pressure on the same to be unequal. The harder pressure is always applied to the very same part of the stone, and will soon make it nneven, so that it is impossible to grind a tool true. To avoid this, put in place of the crank a small cog-wheel of 13 cogs, to work into the former. The stone will make about '07 of a revolution more than the crank, and the harder pressure of the tool on the stone will change to another place at every turn, and the stone will keep perfectly round if it is a good one. This is a very simple contrivance, but it will be new to many of our readers.

Purifiers of Cast Iron .- M. Garnier reneutral solution of chloride of iron, with ad- commends the use of chlorides of silicium, with converted into oxide of carbon in the form of to 40 or 50 per cent. of useful metal. When a Franklin Institute, in Philadelphia, corroborat- dition of salammoniac, one obtains, at the or without chlorine, for the purification of the brilliant flames. When the agitation ceases the sample is procured which bends perfectly when ing the awards made at Vienna to Messrs. Sell-negative pole, metallic iron, in the form of melted iron in Bessemei converters, or furnaces charge is drawn. The metal is even and quiet, cold, the manganese alloy heated to redness is ers, Corliss, and other makers, has proved that bright, fragile, nipple-like prominences that with fixed or revolving soles. The chlorides Metals.

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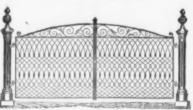
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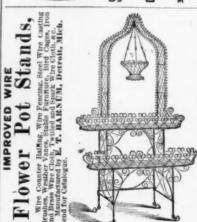


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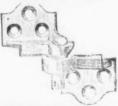
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Furniture Nails Wire Nails etc., etc. We particularly invite the attention of large buyers to our Patent Picture Scotch Pig and Western Irons.

BY W. J. KEEP, C. E.

Open grained foundry iron is softer and weaker than white iron, and when fused, is more fluid, and remains so until just before the iron becomes solid. White Iron, though it fuses at a lower temperature than gray iron, is not as fluid when it is melted, and becomes thick and pasty before solidification. All grades between foundry and white fron possess the described qualities, in proportion as the iron approaches either to gray or to white.

In the manufacture of stoves, iron must be used that is very fluid, so that every sharp edge and crnament will be perfect. The iron must also be "long lived," as molders term it, that it may remain fluid until just before it changes to a solid. It is desirable to pour a casting with iron as cool as possible, to insure a good surface; therefore, the cooler the iron can be used, and still remain fluid enough to fill the nold, the better. Mr. Mallet's recent researches on this subject indicate that the perfection of ron castings is not due, as has been supposed, o any expansion of the metal at the instant t which it crystallizes, but is entirely dependnt upon the last named properties of iron.

In pouring a casting through gits on opposite ides of the mold, if the iron lacks these properties it will be likely not to unite when it omes together.

The strains which cause stove castings to brak in shipping and by the action of fire are n a majority of cases, those internal tensions which, no doubt, ore in a great measure the re uit of unequal shrinkage of the iron in cool g, after being poured into the molds.

This subject of shrinkage 's an unsettled testion as yet, but there is no doubt about e correctness of the statement that the melt d iron will shrink in co ling in proportion to the amount of heat that it contains when it is poured into the mold; therefore, the lower the nelting point of the iron, the less will be its shrinkage and the resulting strains. This may not be the only element that will affect shrinkge. The presence of sulphur and phosphorus, and peculiar mixtures of ores in the blast furace, may affect the irons produced otherwise han by raising or lowering their melting points; but on these matters there are as many pinions as there are furnaces. By mixing different brands of iron the same

esult may be reached as by means of a peculiar nixture of ores. If it is desirable to use a particular brand of iron, on account of its cost, that is too hard, or if it be not fluid enough, these and other defects may be remedied by nixing others from with it.

East of the Allegheny Mountains the iron is naterially different from that made further West. Many Eastern stove founders have by experiment found that they can get the mix-ture they desire without using any foreign iron. This is usually supposed to be on account of the phosphorus which Eastern iron contains, an element which seems to give fluidity to the iron when melted; but it would probably be as correct a statement to say that it is on account of the iron becoming fluid at a lower temperature than many other irons.

Iron, as generally smelted in the West, is made from a mixture containing about 75 per cent. of Lake Superior hematite ore and about 25 per cent. of some magnetite which will aid the process of smelting, and which will neutralize the undesirable properties of the Lake Superior ores. There are, however, some ores rom the Lake Superior region that make exellent iron when smelted alone. Irons made from these ores range from a soft, tough, very open grained foundry, through all the grades to white iron. In castings for machinery it is very strong, and the wrought iron made from it is hardly excelled in strength by any other. For stove castings much of the No. 1 iron is too soft, and where it or the harder numbers are used, the plates are found to crack. The foregoing remarks explain the reasons for this as fully as present investigations will permit. To improve these irons, mixtures are made with them of irons from other localities, and we are of the opinion that, by careful investigation and experiment by practical men in the West, irons can be found which can be easily pro-cured, which, when mixed, would have all of some founders are now able to make such mixtures.

The peculiar qualities which prevent the found that by mixing Scotch pig in certain pro- as they have gone, are favorable. wholly counteracted.

struction of the stoves.

also, China, till, Steel, and Silvered from 800 to 900 lbs.), and in addition to these handling and management in heavy ground,

But it can hardly be said that strength is guns, of being sold for old iron.

what is required in stove plate iron, except enough to permit of shipment and handling. but rather an absence of internal strain is what s required, which strain, if present, would be likely to be increased by the expansion caused by heat from fires; therefore, the Scotch will robably, all things being considered, benefit

the resulting iron for this particular use. We should here remark that in some parts of the United States there are blackband ores and bituminous coal which seem to be suitable for the manufacture of iron very similar to Scotch pig iron, but so far as we know the iron made by the use of these materials is very unlike imported Scotch. It is prefended that it has the qualities of foreign Sesteh pig, but it would be difficult to find any material difference in the appearance or action of this and of ordinary 'silver gray" iron, which any furnace is liable to make at times.

"Silver gray" iron is that in which the carbon has been replaced by silicon, and, as I. Low-thian Bell remarks, "it runs like water, but is absolutely worthless, the castings being weak to rottenness."

Eastern stove founders formerly used this to some extent to soften hard irons, but its use is at present almost ertirely abandoned. Many Western men, having nothing better that they can afford, consume much of it, and are troubled, as a consequence, by the cracking of their

This silver gray iron is only good, in very mall quantities, to lighten the color of the surface of stove ca-tings, a matter of no imortance when gamed at the expense of frength. We have no doubt that with the great variety of Western irons, if sufficient attention were directed to the matter, a mixture might be made without using a pound of imported iron that would equal, and perhaps exel, Eastern iron for stove castings

#### Early Philadelphia Gas Tribulations.

The editor of the Railway World, apparently in old Philadelphian says: "We remember that many years ago, when all the houses in the city were veiled in comparative darkness, and the light from the street lamps was insufficient to enable one to avoid violent contact with the posts on which they were perched, it was proposed to crect works for the manufacture of gas with which to illuminate the black darkness of the highways when the moon refused to shed her light on the metropolis. The elderly ladies discussed the proposed innovation at their tea tables urgency which marked most emphatically the extent of their alarm, and many found indubstable indications of the peril that awaited them at the bottom of their tea cups. The young ladies, too, were horrified in contemplating the sooty area which was to follow the introduction of gas, and destroy the beauty of their apparel, to say nothing of the impending danger which was the theme of many drawing rooms; while to return to the men, they fought the proposition with a zeal which was commensurate to their fears of the coming destruction of their property.

"The great forte of the opposition was the probability, if not the certainty, of explosion of the vile stuff that was to be substituted for the oleaginous material with which they and their fathers and their grandfathers were accustomed to smoke themselves and the interior of their houses from the beginning to the end of the year, and we remember quite well, that a gentleman of some scientific attainment, who afterward occupied the position of chief engineer of the gas works, was among the most prominent of the prophets who predicted the nost disastrous explosive results. But the brains of the city got the ascendency, and the men who were most amply provided with that rare commodity brought to a concentrated compass the money that was required for the prosecution of the work, and at length the gas company was organized; the works were constructed, the pipes were laid in the ground, and the city made to dazzle in a new and brilliant light. No explosions took place, no garments were injured from the smoke which was expected to envelop the city like a pall, and the old women, whether in pantaloons or petticoats, who had fought the new idea well nigh to the death, accepted and availed themselves of the improvement as though they had been

Steel Bronze .- A new invention of Major General Achatius, one of the Austrian Artillery Lake Superior from, which is generally used. Committee, is exciting considerable interest in from meeting the requirements for stove plates | military circles, and even beyond them. It is a are that it is not very fluid, that it is not "long composition which he calls steel bronze, belived;" it shrinks very much, and the plates cause both in power of resistance and elasticity made from it consequently crack. It has been he considers it equal to steel. The tests, as far portions with these irons, these defects are 1000 shots have been fired with increased greatly modified, and perhaps in some instances charges from a gun made of this bronze composition without the least deterioration being But Scotch pig varies in quality as much as visible. It is asserted that the grooves, which American iron, and we have seen apparently are the first to suffer with bronze guns, are as good Scotch make a mixture harder than it was perfect as they were on the first day. Hitherto the experiments have been made with the At large foundries, where only tove plate is common projectile in use with the present nade, there is usually no old scrap iron used, bronze gun. The experiments are to be conbut when such scrap is used, Scotch pig or tinued with closely-adjusted projectiles, and the some equivalent must be used to make the last test is to be the buesting of the projectile work soft enough to be manipulated in the con- in the gun. Should it stand all these tests a battery will be formed in the Arsenal to test the Scotch pig iron is made almost wholly from range and precision as well as the adaptability blackband ore, and with raw bluminous coal of the new composition for breech loaders. If as fuel, and is made in Scotland. It is cold found equal in all these respects to steel guns, short, generally soft, very fluid and very weak the steel bronze gun will have the advantage of (the best Scotch iron is only expected to bear being lighter, and consequently superior for qualities it is very dirty. Then we conclude which will be a great source of saving; for it is that under ordinary conditions any addition of calculated that the present bronze gun might Scotch to Lake Superior iron would neutralize be transformed at about one fourth of the cost of large buyers to our Patent Picture
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redshortness, make the mixture "long lived" which a change to steel guns would entail. It would, too, be much cheaper, for the worn-out guns might be recast, instead, as with steel

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and the side flanges are folded ready to lock into the body of the kettle, thus forming an integral part thereof. It is double seamed to the bottom, as the rest of the body is and soldered at top to the edge of the breast. After the Spout is stamped, and the upper flanges locked together, the whole is immersed in Molten Tin, and com pletely recoated, making a perject article. It makes the strongest Spout yet produced, and entirely obviates the objection to all other similar articles, viz: leaking at the line of union with the body. It is rapidly superseding all others. Ask your Tinners' Stock Dealers for it.

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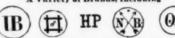
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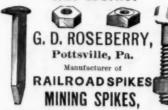
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New Patents.

We take from the records of the Patent Office at Washington the following specifications of certain patents lately issued, which will be found interesting :

IMPROVEMENT IN THE MANUFACTURE OF IRON AND WORKING AND WELDING OF STEEL

Specification forming part of Letters Patcat No. 156,220, dated October 27, 1874, issued to Abraham T. Hay, of Burlington, Iowa

The nature of this invention relates to a new compound or flux to be used in reducing or decarbonizing crude or cast iron for the manufacture of wrought iron or steel, and for work ing or welding wrought iron and steel: and duminium, oxygen and silicon, with trace of carbon, sulphur and phosphorus.

Take, by weight, fifty parts of artificial eroxide of iron, or the natural oxide of iron known as Iron Mountain, Shepherd Mountain, or Pilot Knob iron ores of Missouri, ten parts of silicate of alumina, such as clay, old fire bricks, &c., to which may be added a small percentage of wood ashes, with thirty place as the most popular Steel Pens in the parts of hard coke, or carbon in any other

Subject this to the action of a furnace until thoroughly melted and combined; or melt and combine the compound in any other convenient manner or apparatus. A yellow metal fluid is obtained, which, when properly cast in iron or other molds and cooled, forms the compound eady for use.

The flux thus obtained may be applied in my ordinary manner to the reduction or decarbonization of crude or cast iron for the manad Schools of the country; and are for sale ufacture of wrought iron or steel, or to the working and welding of the same. In applying the compound to the reduction of cast iron for the manufacture of wrought iron and steel, employ about five per cent. of the same with one per cent, of lime or limestone, both of which may be pulverized to any degree with the "straight red short" Missouri pig iron. These place in the ordinary charcoal bloom forge, or other reducing furnace, and work in the manner well known to iron workers until it yields a metal capable of being rolled into bars or rods suitable for the finer grades of

wire, tinner's rivets, etc. When the compound is used for welding or working iron or steel proceed as follows: Form a "pile" or "fagot" of spring or plow steel, and employ about four per cent. of the compound as a flux in a pulverized condition. Heat the pile or fagot in the ordinary manner until it arrives at a welding heat; and then roll or otherwise work the mass into solid homogeneous bars or rods, which will be admirably adapted to the manufacture of wire, and for other purposes in which a low grade of steel is required.

Claim .- 1. The compound of iron, aluminium, oxygen and silicon, as and for the pur-

poses set forth 2. The process of decarbonizing or reducing crude iron or cast irou in the bloom, forge or other furnace, by the use of the above described compound or flux, substantially as and

for the purposes set forth. 3. The process of working and welding high steel in the ordinary blacksmith's forge by the use of said flux, substantially as and for the purposes set forth.

Old Plows .- A plow used by the Emperor Joseph II., of Austria, in 1769, was placed beside a modern plow in a portion of the Austrian department of the Vienna Exposition set apart for the exhibition of the old plows of various nations. No better proof could be given of the great advance in the improvement of plows which has marked the 100 years which have elapsed since his Imperial Majesty worried himself and his mother earth with that plow. This venerable plow was composed of the root of a tree, with the stem for a beam, resting on an axle with wheels underneath it of about 236 feet in diameter. The handles were secured to the knee by holes bored into it, into which the handles were secured. The share was a piece of iron about 9 inches long secured to the point by the knee, and then a strip of board about 6 inches wide was secured near the share. This last contrivance was designed to answer the purpose of a mold board. The old English plows, though much in advance of this Austrian one, were very awkward and weighty affairs such as now would not be accepted as a gift by farmers in any civilized country. Spain exhibited an old plow with shafts and a wooden share. South France, a plow constructed of wood, with the exception of the share, with wooden mold boards 5 inches wide. This plow

The Mania for Railroad Building .-Sole Western Agents. In a recent lecture Mr. Chas. Francis Adams says: It appears that in 1844, in England, in a single season, schemes were set on foot which involved an expenditure of £340,000,000, an amount equal to the whole interest-bearing debt of the United States. The mania in the United States existed from 1868 to 1873, during which construction jumped from 3000 to 7000. and then to 8000 miles a year. In Michigan 1000 miles were built in 28 years, and then 1700 miles in the next four. In that State 13 roads now fail to earn their interest by the sum of \$2,700,000. In Illinois during 11 years, between 1857-'68, the construction averaged 85 miles a year, in the next five years it averaged 664 miles. Of the 3300 miles of road built in those years, not 300 were apparently profitable. But years, not 300 were apparently profitable. But Kansas afforded the most extraordinary flustration of the fury of the mania. With 430,000 people only it had more miles of railroad by a third than Massachusetts, and none of it was prosperous. The Grangers are the best friends of the holders of railroad securities, because their action has suspended the building of any new railroads. From the statistics it appears that, in accordance with past experience, in about four years more the country would grow up to its present railroad system, and it would tration of the fury of the mania. With 430,000 c six different sizes. Prices, \$165, \$20, \$252 c six different sizes. Prices, \$10, \$252 c six different sizes. Prices, \$10, \$252 c six different sizes. Prices six different six different sizes. Prices six different six different sizes. Prices six different six d Eron.

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Our second point needs no explanation from us, as chilled iron is conceded by all to be the hardest and most durable metal used for this purpose.

Its temper is uniformly hard, and will not scratch nor corrode.

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Our third point is secured by a movable beam, placed over the center of the work, which can be so nicely adjusted by moving to the right or left, that the plow will run without handling. With these plows the most uninteresting portion of farm labor becomes a pleasure and a pride.

Our fourth point is secured by the combination of our chilled metal, with the common sense shape of moleboard and share. Every part of the metal below the ground is subject to equal wear, leaving no portion intouched to which it e soil can attach and clog the plow. The charge from gravely to prairie soil can be made with an ety, as the metal is so, ard that the content a scratcher; in new its peculiar smooth-

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with the same amount of power expended. The great durability of these plows, consequent upon the extreme uniformity and hardness of the chilled metal, is another item to be considered in this connection.

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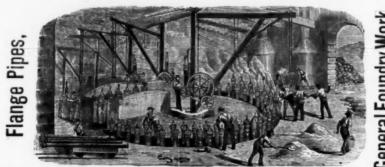
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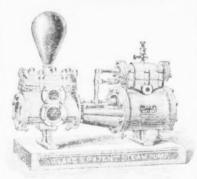
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The manufacture of needles, first carried on n Spain, and thence spreading to Germany, may be said to have taken root in England in the sixteenth century, and now constitutes a by no means unimportant British industry. Its sole seat is Redditch, a small Worcestershire town, about 14 miles from Birmingham, whose population of 7000 is almost exclusively emoloyed in the numerous divisions of labor conas acquired a world wide reputation for the xcellence of its productions, the fabrication of which, it may be said, involves a great number or distinct and intricate processes. For this reason we shall not, in dealing with the needle manufacture, attempt to describe it with tech nical accuracy at length, but shall simply give sketch of these small but highly important omestic implements from the rough wire up to the finished glittering product. The processes of manufacture were seen in the factory of Messrs. W. Bartleet & Sons—one of the best and oldest needle-making houses.

The steel wire used in the manufacture is received in large colls, and is of different gauges to correspond with the various sized needles it | ply covers her finger with a piece of calico, and, is desired to produce. It can be very well understood what great care should be bestowed on the selection of the steel used in the manu- proceeding thus with great despatch, she also facture of these articles, as the price of steel shears into proper lengths, regulated by a "cut- into packets of 1000, mainly to enable the firm ting measure," and the wire so cut is then to judge whether proper economy has been obby two iron rings. These bundles are trans- raw material used, ferred to a furnace, and afterward rubbed Preliminary to drilling the eyes, the heads on an iron plate with an instrument, the object being to straighten the wires, each of block of red-hot fron. The "burr," or rough which, it should be said, is of the exact length erated on by rapidly revolving grindstones, which do the pointing business with great speed and precision. A double-pointed wire is, of course, exercised in the finishing and the overed with a film of black oxide is now bevire-where the eyes are to fall-is the funcon of what is called the "skimming" machine. In passing through it the central portion of each wire is brought into contact with a revolving strap carrying emery powder, which removes the objectionable film, and renders the wire fit to pass on to the stamping press. Here stands a man, who takes a wire, adjusts the center with nicety under the steel die worked by his foot, and stamps an impression, but without perforating the wire. The dies of course correspond with the size and make of needle in ourse of manufacture. The eyes of the needles are but partially formed, and we follow them to the eyeing press. The exact spot where the eyes of our double needle are to fall is indithe girl who works the press punches them in reply: out. This process is, as may be imagined, one perhaps transient, state of things in the user. After this process, which causes many of the needles to become crooked, they are examined while each one is rolled with the finger over a smooth steel anvil. Those that are not straight are detected by this means, and each one is tapped with a small steel hammer until perfeetly straight. This work is generally done by women at their own cottages. The needles amount of water supplied to the city of London during 1874 was something like forty-five thousand millions of gallons. The daily quantum 20,000 to 90,000, and are ready for "scourtitles in each month of the year were as foling." Upon their arrival at the scouring mill the needles are covered with a film of oxide, which has to be removed. This is effected by placing a quantity of needles in a rough kind of cloth with emery and other de tergent matters, the cloth being then tightly tied up, and the package taken to a machine somewhat in the form of a mangle. Here heavy circular wooden blocks, or "runners," actuated by powerful gearing, traverse to and fro

A Needle Factory at Redditch, England. until this form has been gone through seven imes are the needles deemed properly conditioned, but they then emerge in a state of lustrous polish and perfect smoothness. They are sent on to undergo subsequent manipu lations, of which "evenning" cousts s in shak ing them in trays to form rows-a job per formed by girls, and one requiring more dex terity than may at first sight appear

'Handing," as it is termed, is another manual process for eliminating needles of unected with its staple manufacture. Redditch provide with its staple manufacture. needle making, viz., cutting the wire, a "cutting measure" is, as we have seen, used to ensure regularity of length, but in the many subsequent processes the needles go through it is unavoidable that some should undergo modification in length. At the same time it is very important that those of a regulation size say No. 3, should be exactly uniform. The hander," therefore, takes a row of needles, brings the heads flush with a plane surface, and then lifts out by the points the longest, which are put aside as the "first handing." She deals with the residue on this plan, making in all five or six handings.

To get the heads all one way is the object of 'heading," performed by a little girl who simby pressing it against a row of needles, extracts se with the points turned that way. sorts out all faulty needles, i. e., such as are varies from £15 to £120 per ton. It is cut by bent or broken. The needles are next weighed made into bundles, each of which is confined served in the manufacture, and to check the

ness inside the eye of the needle, is removed by for two needles. Pointing is the next opera- the action of a miniature revolving drill, and tion, and is performed by an ingenious machine, the needles are now fit for the finishing prowhich has superseded the old, and-to the cesses proper. These consist of grinding the workman-injurious manual process. The heads, setting the points, "curing" or dissipatwires are fed into the apparatus through a kind ing dust, &c., that may have accumulated in of hopper, and in the inner mechanism are op- the eyes, "bluering," i. c., removing the blue color of latter, and polishing by means of reis, of course, exercised in the finishing, and the various stages of manufacture call for no little fore us, and to remove this in the middle of the watchfulness and attention. The needles are packed in numerous ways, but great quantities are put up in paper cases, each containing 25. Paper known as "purple," of peculiar make, and impervious to damp, is used, the creasing of the packets being accomplished by aid of ingenious machines. After being labelled, the little packets are removed to a dry room to ensure the removal of all traces of dampness.

#### Thawing Frozen Water Pipes with Steam.

A few days ago the New York Times pubished an abourd editorial on plumbing and plumbers, in which it told how pipes could be thawed out by means of a tin can and a bit of cated by the impression, and, guided by this, flexible tubing. A plumber writes as follows

Your correspondent's idea of a tin can, with of extreme exactitude, but so dexterous does a loosely fitting cork, to thaw out 50 or 60 feet practice make the girls that they seldom of service pipe is simply ridiculous. No prac-'make a mistake," and are able to perforate tical man would attempt it with such a clapsome 25,000 wires a day. A burr or projecting trap arrangement. I do not believe it possible edge is formed by the stamping of the eyes, to do it. It requires more steam than such an and to facilitate its removal the bored lengths arrangement could possibly supply. There is are "spitted" or strung on two wires, and the no necessity of building fires in the streets unprojections, thus being brought in a line, are less the service pipes are frozen clear to the carefully filed down. Next the row of wires is mains, and not in all cases then. At the main broken between the eyes, and for the first time where the service pipes are connected, are some each needle assumes a separate existence, though short turns, which are very hard to get through, still in the rough. The head has to be made and where the service pipes are small, it is alsmooth and even by another filing, which is done with the needles in rows, tho points being thawed the service pipes to this point, and canprotected meanwhile. The needles being in a not get any further, he finds it necessary to dig soft state so far as we have traced them, it is down to the main, and as the paving stones are now necessary that they should undergo a frozen so hard it is necessary to build fires so hardening process. So the furnace is again as to warm them; then they can readily be rebrought into requisition, and the needles, hav- moved. When the stones are removed a sharp ing been heated to the proper pitch, are cast crowbar and pick, with a smart man to use into tanks containing oil or water, as the case them, will remove more frost and dirt in five may be. The play of flame on the surface of hours than a fire would in ten. Where the the liquid caused by immersion of the heated service pipes run straight from the building to steel is a rather pretty sight. The condition of the main (I mean by straight no sharp turns), the needles after undergoing this process is it is not a difficult job to thaw them out if you one of extreme brittleness—they are, in fact, quite rotten. Tempering is therefore the next plan that I know of is to have a boiler made operation called for, and is effected by placing either of iron or copper (the latter I think the the needles on a steel plate heated by a furnace, best), said boiler made so that it can be used on and moving them about thereou. The work, the kitchen range when convenient ; if not, use man who has charge of the matter keeps a a charcoal furnace. The boiler should be sharp look out for the appearance of that graduation of color which indicates that the process has arrived at completion. Care at this pressure of eight or ten pounds of steam, a serstage is most essential, a needle of bad temper vice pipe of 40 to 60 feet can be cleared of ice generally originating a like undesirable, though without any trouble, provided there are no without any trouble, provided there are no short turns, and I think an honest price for doing a job of that kind, say 40 to 60 feet, is \$16 to \$20. A boiler made of copper, tested at 25 pounds, with a safety valve and a globe valve to regulate the supply of steam to the service pipe, any practical plumber can make for \$17. I should like such jobs at the prices given.

The Water Supply of London.

	ing." Upon their arrival at the scouring	lows:			
ì					Gallona
1	mill the needles are covered with a film of		Gallons	Houses	per head
۱	oxide, which has to be removed. This is ef-	1874.	per diem.	supplied.	per diem.
1	fected by placing a quantity of needles in a	January	109,118,500	508,329	85.2
ı		February	109,013,458	509,465	82.5
Į	rough kind of cloth with emery and other de-	March	109,511,116	508,818	82.6
ı	tergent matters, the cloth being then tightly	April	112,124,179	509,017	33.4
1		May	121,281,889	510,083	35.7
I	tied up, and the package taken to a machine	June	125,689,091	510,499	86 9
١	somewhat in the form of a mangle. Here heavy	July	197,563,248	512,203	87.5
ı		August	127,649,728	512,540	87.5
1	circular wooden blocks, or "runners," actu-	September	120,871,501	512,825	35.5
Į	ated by powerful gearing, traverse to and fro	October	116,336,586	519,520	84.5
ı			111,277,252	513,772	82.7
1	on a table upon which are placed the packets		106,947,278	514,118	81.4
1	of needles. Each individual one is, by the	Yearly av'rage	116,451,402	511,178	34.8

of needles. Each individual one is, by the great pressure thus brought to bear, made to revolve. After a sufficient time has elapsed the needles are removed, washed, and again transferred to the scouring machine, Not great pressure thus brought to bear, made to

# KANAWHA

PUMP WORKS Burlingham & Purdy,

PROPRIETORS,

Depots :

88 Camden Street, Baltimore, Md. 103 Chambers Street,

Factory, Charleston. West Virginia. Manufacture the Genuine

New York.

CUCUMBER WOOD PUMPS.

Price List with description sent on application.

See wholesale price current in



OSBORN BRIGHT METAL CAGES.

ALVAN DRAYTON, General Agent

SPRAGUE SASH WEIGHT CO., YOUNGSTOWN, OHIO,

# Reasons for Using our Goods.

Hogs when ringed are prevented from rooting, and fatten quickly...

Pastures and clover fields are kept smooth and are not destroyed by the hogs rooting hem up.

Feed lots in the winter are kept smooth, and corn that is otherwise rooted and tramped into the ground is saved.

I The Triangular Wire Ring, manufactured only by us, is the only wire ring that can be inserted in the hog's nose with one grip on the Ringer, and is the only ring that will remain in a hog's nose, as it fits close, will not turn in for the joint to irritate the nose, is not liable to be torn out, and heals quickly.

No puncturing of the nose required to insert our ring.



#### SOMETHING NEW.

i We shall this present season make a **Heavy Tinned Wire Ring** that will not rust in the hog's nose. The strongest and best ring in the market.

#### Price

The coppered wire ring will be sent unless otherwise ordered.

Samples by mail postpaid on receipt of

retail price.

Goods sent C. O. D. with privilege of ex-

amination before paying charges.

Net prices in quantities, circulars and
posters mailed free.

Our advertisements are now inserted in over 1800 newspapers, published in every State of the Union, so that dealers will find alarge demand created for our goods.

## THE NICHOLSON FILE.

All Nicholson Files are cut with the Patent Increment Cut, an invention owned and controlled exclusively by us, the file cut in this manner being Patented as a new article of manufacture, and differs from all other machine cut files (all of which have their teeth cut with equal spaces) by being cut with teeth slightly expanding or increasing in size and space from the point, thus avoiding the too great regularity of teeth common to all other machine cut files. The tendency of all cutting tools with teeth or cutters placed at regular distances from each other may be illustrated (to the machinist at east) by the fluted reamer—as it is well known that if a round reamer be made with (say 12) teeth whose spaces are equidistant, the hole reamed will not be round and smooth, but will approximate to a hexagon in shape. Whereas, if the same number of teeth be made of irregular distances, the hole reamed will be both round and smooth. The same is true of a file, hence the necessity of its having teeth at unequal distances, and to which we have applied the name of Increment Cut File, which possesses all the advantages of hand cut work, and the accuracy and uniformity of machine work. It is now upwards of seven years since this File was introduced to the public, and the demand has increased until our production is undoubtedly treble that of any File manufactory in the country.

We put all files under seven inches in boxes of either one-half or one dozen each. These boxes are neatly arranged, and open on the end, on which the kind is plainly marked with printed labels, acknowledged improvements

The "Increment File" is not an experiment, but an established fact, and already has acquired a legitimate demand or upwards of 500 dozen per day. We employ no regular Travelers, but our goods may now be found in the hands of the principal jobbers and dealers throughout the country.

Prices and terms will be forwarded on application to

NICHOLSON FILE COMPANY,

Providence, R. I.

# USE THE BEST.



Pawtucket, R. I.

The American File Company have the exclusive right to use the Bernot process for cutting files By this method all the advantages of hand cutting are secured, together with an accuracy unattainable in hand work. They are the only manufacturers who employ machinery for testing files and steel.

Goods of all known manufacturers have been repeatedly tested, and interesting tables have been compiled showing the working qualities of files made by different makers, and of files made from different steels, and with various shapes and angles of tooth They have thus reduced the manufacture of files to an exactness and perfection with a uniformity of result, as they believe, never before attained. No file, foreign or domestic, that they have ever tested, has equalled the performances of their own goods taken at random from their stock. Their machines are capable of the most delicate adjustment, and can produce the very finest work known to the trade. Special files made to order. Prominent file manufacturers are having their best goods from our works.

Price lists and information furnished on application.

AMERICAN FILE CO., Pawtucket, R. I.

# FILES

XTRA QUALITY,

MADE FROM THE BEST

IMPORTED STEEL

BY THE

RASPS. (Auburn File Works, AUBURN, N. Y.

JOHN ROTHERY'S Celebrated Hand-Cut FILES,

Made of Best English Cast Steel.

WALSH, COULTER & FLAGLER, Sole Agents, 83 Chambers and 65 Reade Streets, N. Y.

EDWARD PHELAN

Surviving Partner of W. F. SHATTUCK & CO., No. 113 Chambers and 95 Reade Streets, New York,

MANUFACTURER OF AMERICAN HARDWARE.

Coes & Taft's Pat. Wrenches.
Axe, Pick, Siedge & Hammer
Bandles.
Gimiets and Gimlet Bits.
Augers and Auger Bits.
Bruadage Horse Nails,

Mapuire's Wr't Iron Goods. Shattuck's Platform Counter Scales. Yaw's Cow Bells. Axes, Picks and Hatchets. DEAN'S New Patent (1873) Screening Scoop



SHOVEL
For Coal, Coke and Coal

The largest frames are 12 by 18 inches, with seven bars, and are made of the Best Malleable Iron. They are, or can be, wired between bars by an arrangement of holes a quarter of an inch abart, by an ordinary person, to screen any size substance desired. They are warranted to be the most durable and practical Screening Shovel made, or money refunded. Reference—All New York Gas Companies and Hotels.

Smaller sizes on hand. Please address orders to

A. SEE & SON,
N. Y. Shovel Works,
1358 Broadway. N. Y.
And Broadway. N. Y.
And Broadway. Bride: Largest size 80 per doz.
and upwards, according to size of

Clement & Hawkes Mfg. Co.,

SHOVELS,

Planters' Hoes, Trowels and Machinery.

Northampton, Mass.

Send for Circular and Price List.

Schweitzer Mfg. Co., 57 Reade St., N. Y. IMPORTERS & JOBBERS. Established 1816.

# Peter A. Frasse & Co.,

95 Fulton Street, New York,

SOLE AGENTS FOR

Thomas Turner & Co.'s Suffolk Works,

## FILES AND HORSE RASPS.

And Importers of

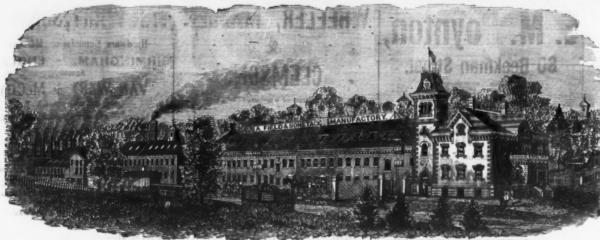
STUBS' FILES, TOOLS & STEEL,

W. J. Davies' Sons' London Emery Cloth, HUBERT'S FRENCH EMERY PAPER.









# A. FIELD & SONS.

TAUNTON, MASS., Manufacturers of

## Copper and Iron Tacks, Tinned Tacks, & Co., at the same place, give employment to

SUPERIOR SWEDES IRON TACKS, for Upholsterers' Use, Saddlers' Supply, Card Clothing, etc., etc.

American and Swedes Iron Shoe Nails.

Zinc and teel Shoe Nalls, Carpet, Brush and Cimp Tacks, Common and Patent Brads, Finishing Nalls Annealed Trunk and Clout Nails, Hob and Hungarian Nails,

Copper and Iron Boat Nails, Paten Copper Plated Tacks and Nails Fine Two Penny and Three Penny Nails, Channel, Cigar Box and Chair Nails, Leathered Carnet Tacks, Glaziers' Points, etc., etc.

OFFICES AND FACTORIES AT TAUNTON, MASS. WAREHOUSE AT 35 CHAMBERS STREET, NEW YORK, where may be found a full assortment of Tacks, Brads, &c. for

the accommodation of the New York Wholesale and Jobbing Trade. Any variations from the regular size or shape of the above named goods made from samples, to order.

WAREHOUSES, FACTORIES, MINES.

BLAST FURNACES, & OTIS BROTHERS & CO. SOLE MANUFACTURERS, 348 Broadway, New York.

#### F MPIRE PORTABLE FORGES

BELTS, BELLOWS OR CRANKS

Empire Portable Forge Co., Troy, N. Y.

#### THE CANADIAN BANK OF COMMERCE.

Capital - - \$6,000,000, Gold. Surplus - \$1,800,000, Gold.

The New York Agency, 50 Wall St., Buys and sells Steriing Exchange, makes Cable Transfers, grants Commercial Credits, and transacts other Banking Business.

J. G. HARPER, Agents.

#### TACKLE BLOCKS BURRACO

Manufacturers of Waterman and Russell PATENT IRON STRAPPED BLOCKS

ROPE STRAPPED BLOCKS, 31 PECK SLIP, NEW YORK

## John Chatillon & Sons,



SPRING BALANCES.

Patent Balances, Union & Counter

SCALES. SPIRAL SPRINGS,

## QPASSENGER CROCKER BROTHERS, 32 Cliff Street, N. Y.

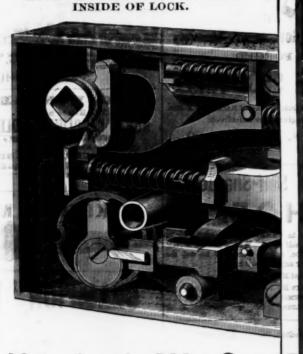
# METALS.

Anthracite Pig Irons, COLD SAND WARM BLAST CHARCOAL IRONS.

> American and English Bessemer Irons, Iron Ores. COPPER, TIN, &c.

Advances made on Merchandise.

Yale Mortise Night Latch No. 70. WITH CAP REMOVED SHOWING



Yale Lock Mfg. Co.,

No. 298 Broadway, NEW YORK. STAMFORD, CT



**Empire and Monitor Lawn Mowers** 

Have been before the public several years, and have given universal satisfaction. Therefore it is not necessary to make lengthy comments, only to say they are the lightest and strongest mowers in the market; also, for simplicity of construction, durability, and lightness of draft, they are acknowledged to be superior to any machines made. They are sold at Panic prices, MONITOR and ENPIRE, 15 in. cut, \$30.00-MONITOR. 10 in. cut. \$15.00.

MONITOR, 10 in. cut, \$15:00.

Agents wanted everywhere.
MANUFACTURED BY Fenn's Faucets & Cork Stops, BARLOW & WALKER, Sing Sing, N. Y.

#### BUSINESS ITEMS.

NEW JERSEY.

A steam fire propeller, called the William H. Havemeyer, for the New York Fire Department, is now being furnished with machinery and fittings at Camden, and will be completed within two weeks. The vessel will cost \$25,000, and running on full time for the next six months will be manned by twelve men, including her he same kind as those on the street fire ento throw twelve streams of water. They can in separating vessels from burning ships or

An iron shipbuilding establishment is to be erected at Bordentown, on the Delaware River, which shows that the whole length of the Delaware, as far as tide water reaches, is available capacity. for this business. There are now along the valley of the Delaware five iron ship yards; one at Philadelphia, one at Camden, one at

The Scottdale Rolling Mill, of Everson, Knap & Co., and the blast furnaces of Knap, Macrum 200 men, and will probably employ 50 more when their narrow gauge railroad is completed.

their patent bell hopper, which is worked by steam instead of by hand.

The Bethlehem Iron Company, of Bethlehem, has the contract for the steel rails for the North Pennsylvania's new line from Philadelphia to New York. They are to be 66 pounds to the

The Eric City Iron Works recently received orders for the construction of ten boilers, from one source and twenty from another. They eccived an order from the island of Porto Rico for a large boiler, and have already commenced work on the same. The plates of which the leads are formed are one inch in thickness.

Messrs. Van de Sande & Cupp's rolling mill, at Lebanon, have orders on hand for several months' brisk work.

The Susquehanna Iron Company's rolling mill, at Columbia, is running full double turn with large orders on hand.

It is rumored that the new furnace of the Glamorgan Iron Company, in Mifflin county, is to be blown in about April 1.

The Easton Dispatch says the East Penn Iron Company, whose works are situated at Lyons station, disposed of \$60,000 worth of stock to the Hereford Iron Company, of New York, Mr. John Noble, of Pottsville, also sold \$20,000 to the same parties. This purchase will give that company a controlling interest, and the furnaces will be blown in as soon as coal can be procured. They will make a specialty to produce only "steel fron."

The light locomotive works of Porter, Bell & Co., of Pittaburgh, are running nine hours

The Lebanon Manufacturing Company have an order for 400 four-wheeled coal cars from a contract to furnish 200 hand pumps, for a Palmyra firm, and a quantity of corn shellers. MASSACHUSETTS.

The Brainard milling machine works, at Hyde new building, and the manufacture of vises

sive addition to the large mill which has been built many years. The engine is a new one of nearly 500 horse-power, 40 inch cylinder, 6 feet stroke, with a fly-wheel 25 feet in diameter, weigh ng 35 tons. This machine was mostly built

pairs, and will put their works in operation in

The Elyria Screw and Tap Factory is now fully in operation, giving employment to 20 hands.

The Gaylord Rolling Mill Company, Portsmouth, has received an order which will keep it

Aultman, Miller & Co., Akron, manufacturcaptain and two engineers. Her pumps are of ers of mowers and reapers, have just commenced introducing their machines in Europe, gines, but of greater capacity, and can be made the European headquarters of the company being at Leipzig, Germany. The annual probe brought to bear on fires among shipping duction of the company is now 10,000 machines, and upon burning buildings a block away from and employment is given to 400 hands, the the river. The Havemeyer will also be useful monthly pay roll amounting to \$20,000. The works have a frontage of 550 feet, are 200 feet deep, and three stories above the basement. The works are being run to their full capacity.

The sewer pipe works of Sperry, Richie & Co. at Talmadge, are being enlarged to double their

At the Akron Boiler Works, J. C. McNeil, are manufactured bollers and all kinds of sheet iron work. The works are 30x80 feet, and all Bordentown, one at Chester and one at Wil- the machinery is run by steam. Employment is given to 30 hands, and the annual production amounts to \$40,000, the capacity of the works being equal to a production of \$70,000. The product is sold mostly within a radius of 40 miles, though within the last year a number of boilers have been sold to go to Indiana.

INDIANA.

when their narrow gauge railroad is completed.

The Union Foundry, at Catasauqua, has increased a day's work to ten hours, and has all its workmen in employment.

Messrs, Weimer & Birkinbine, of the Weimer Machine Works, at Lebanon, are shipping the necessary material for the reconstruction of the Leesport. Iron Works. They will put up their necessary has been been supported by the support of the Leesport and the support of the Leesport and the support of the leesport. Iron Works are supported by the support of the leesport and lees the lees the leesport and leespo

A steam engine has just been completed for the Choctaw nation by the Greenleaf Manufac-turing Company, of Quiney. The Baltimore and Ohio Railroad Company's car shops in Chicago are occupied for busi-ness, and 400 men will be employed.

WISCONSIN.

During 1874 the Milwaukee Iron Company added to its works a merchant bar mill, the building for which is 216 by 109 feet. It contains a 9-inch, a 12-inch and a 21-inch train of rolls, and space is left for an 18-inch train. There are three Siemens heating furnaces. The capacity of the new mill is 18,000 tons of finished iron per year.

The Vulcan Iron Works, at St. Louis, have been enlarged by the addition of a new mill containing trains for rolling light rails, from 30 to 45 pounds per yard. The new mill has a capacity of 60 tons per day, making the whole capacity of the works 200 tons of heavy and light rails per day.

#### Outrages in the Mining Districts.

A letter from Hazleton, Penn., under date of Feb. 28th, says:

During the last few weeks a number of outrages have been committed in the Lehigh region, which culminated yesterday morning in the burning of an engine house and the shoot-ing of a man. The outrages began by a large gang of men appearing at night, and ordering away the men who were working the new slope at the Council Ridge Colliery. This occurred about three weeks ago. Since that time large crowds of men of from 100 to 300, armed with guns, pistols and other weapons, have been marching through the region at night, destroying property, firing into houses, and using the Nova Scotia, to be finished in five weeks; also, weapons to intimidate those at work, the principal object being to stop the pumps, and cause the mines to fill with water.

On Tuesday night they visited the Highland Colliery, broke into two houses and destroyed Park, are to be extended by the addition of a the furniture belonging to the men running the pumps. The also drove away the men sinking a new slope at the same place. They then went The Bridgewater Iron Company have just to the Upper Lehigh and committed the sams completed a new rolling mill, being an extenmen. They then went to Woodside Colliery, and broke into a house and destroyed the furniture of a man whose son was working in the mines, and threatened the pump men. About 2 o'clock yesterday morning, the miners who are on strike, numbering about 300,

stroke, with a fly-wheel 25 feet in diameter, weigh ng 35 tone. This machine was mostly built in the works of the company, and is a model of strength and beauty. The velocity of the large wheel at full speed is at the rate of a mile per minute.

The Lamb Knitting Machine Company, of Chicopee Falis, will not remove their works to Holyoke, as has been reported.

CONNECTICUT.

A new industry is to be established at Bridgeport, consisting of the manufacture of Page's new type-setting machine.

OHIO.

Cartwright, McCurdy & Co., of Youngstown, are running their old mill on hoop iron to its full capacity.

The Canton Bridge Company has just completed a bridge over the Mahoning River at Spring Common.

The propristors of the Toledo Stove Works commenced operations in July, 1873, with a force of 21 men and a boy, and ran two heats a week, melting 1500 pounds of rigi iron.

Turner, Parks & Co., Cuyahoga Falls, manufacture grain cleaning machinery, middlings, purifiers, wire drawing machinery, middings, purifiers, wire drawing machinery, sewer pipe and papei mill machinery. The works consist of a soundry 35x100 feet, machine about 20 clock yesterday morning, the miners who are on strike, strapped all the pumps are dot left force from under the boliers, strapped all the pumps, set fire to the engine house, and all the pumps, set fire to the engine house, and all the pumps, set fire to the engine house, and all the pumps going. The police are assisting to do so at Eskley and Upper Lehigh. There are apprehensions of rough times around here. The men are gathering in large numbers at the Highlands. Three miles from this place as evere disturbance has taken place, and two men were badly beaten; one of them, report says, cannot survive. The police have been sent to Buck Mountain to start the pumps. From Pottswille the following intelligence comes under the same date: The Philadelphia and Reading Coal and fron Company have archine had a loss by fire through incendiarism. Dispatches received from Gen Carbon in this region yesterda

purifiers, wire drawing machinery, sewer pipe and paper mill machinery. The works consist of a foundry 35x100 feet, machine shop 40x50 feet and two stories, flour mill 30x50 feet, with two pairs of burrs, &c. Employment is given to 45 hands, and the annual production amounts to 375,000. The goods are marketed throughout the United States and in Germany.

Parties from Pittsburgh we learn that a disturbance occurred on Friday last at the Loyalhanna Mines, about a mile east of Latrobe, in Westmoreland county, in which fire arms were used. The miners employed at these mines struck about two weeks ago, and the trouble yesterday originated from an attempt on the part of the company to supply their places with new men. President Baker and secretary Walk were knocked down and disarmed. Two miners are reported wounded. The Deputy-Sheriffs arrested the ten miners this morning and lodged them in Greensburgh Jail, and it is stated that deputies are at the mines this evening making more arrests.

# GEORGE GUEUTAL & SON, E. M. Boynton,

Wood Screws, Steel in Sheets,

BAND SAWS, TOOLS FOR BRAZING, &c.

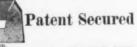


Patented June 28th, 1870. The annexed engraving represents my ELLIPTIC FORKED SAW FRAME, which commends itself to the trade for its simplicity of construction. The Forked Brace tv of construction. The Forked Brace being all in one piece, without any center bolt, secures for the Frame great strength and durability. These Frames are put up-with my best Webs, marked "No. 40, Harvey W. Peace."

HARVEY W. PEACE, VULCAN SAW WORKS.

### WILLIAMSBURGH, N. Y. DIAMOND CROSS-CUT SAW.

\$1.50 Per Foot.



THIS new Saw, which is destined to take the place of all Cross-cut Saws in point of SPEED AND EASE, is manufactured by E. C. ATKINS & CO., Indianapolis, Ind., who are the SOLE MANUFACTURERS FOR THE UNITED STATES.
So confident are we that this is the best Cross-cut Saw in the market that we CHALLENGE THE
WORLD. Orders promptly filled.
E. C. ATKINS & CO.
Saw Manufacturers and Repaires, Indianapolia, Ind.

#### Lloyd, Supplee HARDWARE FACTORS.

MANUFACTURERS OF Bonney's Hollow AUGERS.

Stearn's Hollow Augers

and Saw Vises **Bonney's Spoke Trimmers** 

> **Double Edge Spoke Shaves Adjustable Gate Hinges**

Scandinavian Pad Locks

Flat Key Brass and Iron Pad Locks, &c., &c. 625 Market St., Phila., Pa.

BILLINGS & SPENCER COMPANY, Manufacturers of



WROUGHT IRON AND STEEL DROP FORGINGS

Machine Cranks, Spanners, Parts of Sewing Machines, Guns, Pistols, Drill Chucks, and MACHINERY GENERALLY.



THE BILLINGS PATENT SEWING MACHINE SHUTTLE, The Barwick and Wheatcroft





Patent Self-Adjusting PIPE WRENCHES, of all sizes. Lawrence St., Hurtford, Conn.

80 Beekman Street, NEW YORK,



lined on MI tooth. Telegram Dated Oct. 1st, 1874. STATE FAIR, EASTON, PA.

To HENRY DISSTON & SONS: I want von to publicly test that challenge on Cros Name time and place within thirty days American Institute preferred. E. M. BOYNTON.

E. M. Boynton gave on Wednesday of last week an exhibition of what his Lightning Saw could do at the Pennsylvania State Fair, in which two men sawed through a sound oak log, 16 inches in diameter, in 17 seconds. Mr. Boynton informs us that his export trade is increasing, he having lately made large shipments of his saws to Australia and othe distant markets.—The Iron Age, Oct. 8, 1874.

For fuller report of this exhibition see the Easto Morning Dispatch of Oct. 1st, 1874. Henry Disston & Sons cannot furnish Lightning Why do they imitate mine?



And Plastering Trowels,

ROCHESTER, N. Y.

A large Stock of Cross Cut Saws constantly or land. Orders filled promptly. Dietrich's Double Handle One Man tross t'ut Saw made with an ind of tooth desired. Our patent method of grinding Hand Saws makes them superior to any in the market.



Putnam's Government Standaro FORGED

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Price of Hog Ringer, 75c, each,
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And the "Patent Ivery" or Celluloid Knife. These Handles never get loose, are not affected by hot water, and are the most durable knives known. Always call for the Trade Mark "MERIDEN CUT-LERY COMPANY" on the blade. Warranted and sold by all dealers in Cutlery, and by the MERIDEN

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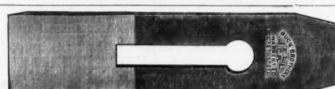
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Gouges of all lengths, and circles beveled inside or outside. Nail Sets, Scratch and Belt Awis, Chisel Handles of all kinds. Orders filled promptly: generally same day as received.

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which must super-sede all others. It

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Shelton Company, TACKS & SMALL NAILS, Carriage. Machine, Plow, Stove and Tire Rolls, Crack Screws, Bed Screws, &c.

perienced by the manufacturers of this city whose works are located on the banks of the Schuvlkill river, from the flood caused by the In some instances the mills are flooded to the second floors, beside being greatly damaged by floating ice. Much ma chinery and goods have been injured, while the loss to private dwellings has also been very

great.

These floods have not been unusual accompaniments of severe winters, but the greater damage sustained this season is said to have been due to the rule of the Park Commissioners which prohibited the cutting of the onthe river included within the park limits, and which left a solid body of unusually heavy ice to act as a dam against the increased flow of water caused by the late heavy rains. Next to this matter, as the ruling subject of gossip, comes the searcity of coal, which has reached a point which threatens to put a stop to all Pig Iron production, in the Schulkill Valley at least. Had it not been that most of the furnaces of this region had been idle, or nearly so, for a long time, there would not now be enough coal to keep any furnace in blast; as it is, the supply is now entirely exhausted, and it is only by buying from furnaces out of blast that those at work can continue. The effect of this scarcity will be to advance the price of Pig fron and to throw large numbers of men out of employment. Unless the difficulty with the miners can be settled, a large majority of the anthracite consuming iron works must go out of operation. Of a setflement there seems just now little prospect. A meeting of the Executive Board of the Miners and Laborers' Association which lite prospect. A meeting of the Executive Board of the Miners and Laborers' Association which provide the dischurge of a number of their officers from the employ of the Reading Company, on account, as alleged, of their being officers. Resolutions condemnatory of this action were passed. A committee was appointed to aid in discovering and bringing to punishment the incendiaries who set fire to the fan-house of the East Norwegian shaft, if it was an incendiary missing which would lead to the arrest and conviction of the incendiary was only made to influence sentiment against miners. The most important action taken was the adoption, almost unanimously, of a resolution dending, after March 1, a basis of \$2-75 for contracts and \$3 for day labor. Th These floods have not been unusual acc

and the outlook for the production of anthracite Iron is very bad.

The annual report of the Pennsylvania Railroad Company has just been issued, this week, in compliance with the recommendation of the Committee of Investigation last fall, that the reports be issued long enough before annual meetings to allow stockholders to become informed of the condition of affairs. It is unnecessary here to enter into details of the report, as it will doubtless be noticed in your columns. The figures given show the affairs of the company to be in excellent condition, while the cost of operating the road, including all the branch lines, in 1874, was under 58½ per cent. of the receipts, and of the main line, but 54½ per cent. of the receipts, and of the main line, but 54½ per cent. of the receipts. The statement in reference to the amount of steel rails on the road shows it to be far in advance of any road in the country in this respect. No better explanation of the dull times felt by the iron trade need be sought than the figures which show that the amount expended in 1873 for construction account was twenty millions against only three millions in 1874. A large proportion of the report is devoted to the improvements made and proposed at the Philadelphia and New York termini. Ample preparation is to be made for Centennial traffic, and the announcement made that it is not proposed hereafter to obtain any further extension of railroads beyond completing contracts now made. The report should be a satisfactory one to shareholders, and certainly shows the company to be managed with great ability.

railroads beyond completing contracts now made. The report should be a satisfactory one to shareholders, and certainly shows the company to be managed with great ability. The annual report of the Lehigh Coal and Navigation Company, for 1874, shows, also, a very favorable condition. The total receipts from railroad, canal and coal lands were nearly two millions dollars, with expenses of \$1,729,592, including three dividends of 2 per cent. each. The coal tonnage of 1874 was 3,071,487 against 3,176,280 tons in 1873, being a decrease of 104,793 tons. The experience of the company as to the working of the contracts under which its property is rented, justifies them in starting that eight per cent. per annum can be regularly paid from their income, with a prospect of an advance on this rate very soon. The Insurance Commissioner of Pennsylvania has just issued a report, which includes some very valuable statisties of the capital of and property insured by the sixty-two Insurance Companies chartered by the State, which number does not include mutual or life companies. The aggregate cash capital of the sixty-two

Companies chartered by the State, which number does not include mutual or life companies. The aggregate cash capital of the sixty-two companies referred to is \$10,187,384, with gross assets on Jan. 1st, 1875, of \$28,515,414, and liabilities, including capital and reinsurance, of \$22,780,790, or a surplus of \$4,780,600. The cash premiums received in 1874 on fire risks were \$8,919,839, with losses paid of \$4,421,811. The total amount of risks underwritten in 1874 was \$959,998,423. These figures are stupendous, and show to what an extent the insurance business has grown in keeping pace with the progress of the country.

An account of the discovery of an immense natural gas factory, in the shape of a burning well at Tarentum, in Butler country, has just appeared. This well is 1145 feet deep, and had struck the first sand rock, and the flame of burning ges is 40 feet long and 15 wide, glving a light which can be seen 13 miles at night. The heat in the vicinity is tropical, trees and grass growng now as in summer. Parties are preparing to attempt the utilization of this natural fuel, and if it can be piped, and the tools now in it extracted, the supply of gas would be sufficient for the use of all the iron works even of Pittsburgh. Probably the subject of gas fuel is yet entirely unknown, and in the near future we may see, not in large conters for all the uses of heating and illumination. Nothing can be of greater importance to our industries than such a supply of cheap fuel.

Foreign Metal Reports.

PHILADELPHIA CORRESPONDENCE.

| timines threaten the near by or remoter population with whom we deal; there will be great activity with whom we deal; there will be great activity repairing and building railroad lines both in Euror and Asia during the summer time; and in the even and the commercial. execution of small orders and the larger ones under contract for some time past. Prices are low, due in a measure to the anxiety of some new concerns to get some little business. A few large works are busy on rails and plates for inon-fads. Some steel works are also filling orders of a certain magnitude. Paris is quite ton the basis of 230 francs for No. 1 Merchant Iron, and 290 thick sheet. The North and the Ardenness are quiet; the latter are slightly looking up. Coal.—The downward tendency has made good progress, and is likely to continue some time longer. We are down to 41 francs here for half greasy Coal.

BRUSSELS. Feb. 14. 1875.—Iron.—If the South Welsh lock-out be not settled in some amicable manner, like, for instance, by arbitration, within a month from now, not a blast furnace will have been kept going in that important region, and the Cleveland and other districts will have to be resorted to in order to fill pending commands, and prices will rise not only in England, but on the Continent, too, especially in our own country. The Minister of Public Works has promised to investigate the question of Steel Rails in consequence of some of them having been broken during the late severe frosts. It is presumed because they held too much phosphorus. Works has promised to investigate the question of Steel Rais in consequence of some of them having been broken during the late severe frosts. It is presented because they held too much phosphorus. Belgium exported 168,204 tons of Iron Ore In 1874, or about 106,837 less than in '73, and '73, 080 less than in '72. The export of Pig Iron has not exceeded 16,137 tons, being a decrease of 11,000 as compared with the preceding year, and of 32,000 compared with '72. We exported 26,030 tons Sheet Iron, an increase of 7896 tons over '73, and of 20,000 tons, against 87,600, and 101,650 in '73 and '72. Of Iron Nails we shipped 11,666 tons, against 9765 in '73. We imported 774,786 tons of Iron Ore, against 739,500 in '73, and of Pig Iron 161,458, against 16,488 in '73. Dealings in Iron are pretty much at a standstill in Belgium. Coal.—Approaching the spring season, as we do, the demand diminishes, and our companies content themselves with extracting just enough to supply the moderate current demand and fill old contracts. Their prospects are the reverse of encouraging.

(Borsenhalle.)

Hamburg. Feb. 12, 1875.—Metals.—There has been a slightly improved demand for consumption observable, in the German metal markets in general, while on the other hand speculation has remained dormant. Copper.—Chilean charters being moderate, and an Indian demand for Calcutta and Bombay having sprung up in England, a better feeling has pervaled the markets on both sides of the channel. In England the decline has apparently been stopped for the present. We are steady here on the basis of 115 marks Lake Superior. Stettin is steady, too, at 90 to 105 for Chill, Swedish and English. Tin.—The weakness in England as well as in Holland causes consumers not to anticipate requirements, and we part of holders to moderate stocks. We quote firm, Eng marks, German 24 to 25½, and Span Stetten is well supported at 26½ Tarnowitz. Spelter—Lacks activity figures asked. We quote Silesian on to arrive from 24 to 24½ marks. Breameantime, not wavered from its comp

most humane inventions of the age.

W. T. & J. MERSEREAU, and illumination. Nothing can be of greater importance to our industries than such a supply of cheap fuel.

Foreign Metal Reports.

Foreign Metal Reports.

FRANCE.

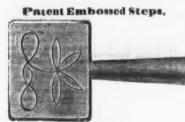
(Moniteur des Interets Materiels.)

France.

(Moniteur des Interets Materiels.)

Parts, Feb. 14, 1875.—Metals.—Business in the European Metal trade in general seems to be picking us, a little, but the headway thus far made is but slow. The elements at hand for a satisfactory spring campaign are, however, of an encouraging us, from the cargo of Australian, per Marle Yeas, is reported at 30 galiders; that pean determed. Configures meglected: The sale of the cargo of Australian, per Marle Yeas, is reported at 30 galiders; that pean determed. Cond continues neglected: The sale of the cargo of Australian, per Marle Yeas, is reported at 30 galiders; that pean determed from along side, but to be weighed on shore. Exchange on London, 6 months sight, 11 65 guilders per given equal to the cargo of Australian, per Marle Yeas, is reported at 30 galiders; that pean feet and tetriever has been sold at an extensive of cequal at a cash, delivered from along side, but to be weighed on shore. Exchange on London, 6 months sight, 11 65 guilders per given equal to the cargo of Australian, per Marle Yeas, is reported at 30 galiders; that pean the cargo of Australian, per Marle Yeas, is reported at 30 galiders; that pean the cargo of Australian, per Marle Yeas, is reported at 30 galiders; that pean the cargo of Australian, per Marle Yeas, is reported at 30 galiders; that pean the cargo of Australian, per Marle Yeas, is reported at 30 galiders; that pean the cargo of Australian, per Marle Yeas, is reported at 30 galiders. The second the cargo of Australian, per Marle Yeas, is reported at 30 galiders. The second term of the cargo of Australian, per Marle Yeas, is reported at 30 galiders; that pean the cargo of Australian, per Marle Yeas, is reported at 30 galiders the pound steriling, to £89. 7/per ton, free on bound

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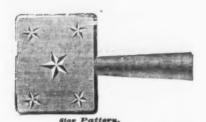


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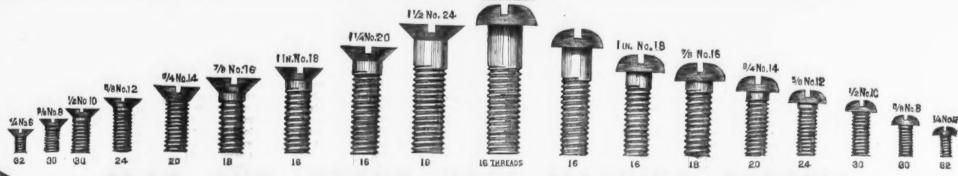
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# The Iron Age.

New York, Thursday, March 4, 1875.

DAVID WILLIAMS - Publisher and Proprietor. JAMES C. BAYLES - Editor.

JOHN S. KING - - Business Manager.

NEW YORK, January 2, 1875. Until the 1st instant the postage on newspapers was paid by subscribers at the office where the paper was received, the yearly rates on the different cilitons of The Iron Age being as follows: Weekly, 40 cents; Semi-Monthly, 40 c nts; Monthly, 24 cents.

Under the provisions of the new postal law, which went into effect on the lat instant, prepayment at the office of mailing is required, at the late of two cents per pound for the Weekly, and three cents per pound for the Semi-Monthly and Monthly, which will make the postage as follows on the different editions: Weekly, 50 cents; Semi-Mouthly, 30 cents; Monthly,

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#### Rapid Transit.

The reason we have had so much talk nd so little accomplishment in the matter "rapid transit" in this city, is because we have begun at the wrong end of the problem, and attempted to solve it by working backwards. Ambitious inventors have elaborated very pretty schemes of elevated and underground railways, and have sought to induce capitalists to buy the charters granted them at prices which would have paid many times over for the services of a corps of engineers who would to thinking. Until very lately it has been have devised better systems. For this readificult for us to realize that a nation of son nothing has ever come out of the dozen whose arts and industries we know so little or twenty special charters granted to the possessed capacities for acquiring a masincorporators of imaginary companies, tery of the modern arts which would make As the rule, the merchants and property them formidable competitors in the manuowners of New York, from whom the facture of anything of general utility. large capital needed to build a steam While admitting the ingenuity and indus passenger railroad through this city try of the Chinese people, and their won-

making large investments. They must most "outside barbarians" have thought

being carried into execution. part of the city with Westchester in a reaus to have it. Several of our largest capitalists and property owners, recognizing rapidly extending city limits, have petitioned the mayor to ask, on behalf of the people of New York, that the Legislature Issued every Thursday Morning. Contains full councils shall appoint boards of commisand when this is done the right to follow such routes, with all needful franchises and surety that the road shall be built and of high character and well known responsary to employ. Fortunately, a period has as that proposed no possible objection can the petitioners at their word, and show law asked for. This done, and a route sewho have signed the petition will come gation they have voluntarily assumed. A mand public confidence, the requisite capand we should have "rapid transit"-a other way yet suggested.

#### Chinese Cheap Labor at Home.

of that industry may perhaps be more investment in manufacturing operations. of that industry may perhaps be more rapid than seemed probable a few years ago. A correspondent of the London Times reports the arrival of a Mr. Henderson, who has come to England with a commission from the authorities of certain proveinces of China to procure the necessary machinery and plant for mining coal and iron ores and manufacturing iron; also, to engage competent persons to superintend the gage competent persons to superintend the series in manufacturing operations.

With all these facts in mind, we think it safe to venture a prediction that China and Japan have a great industrial future. This safe to venture a prediction that China and Japan have a great industrial future. This safe to venture a prediction that China and Japan have a great industrial future. This safe to venture a prediction that China and Japan have a great industrial future. This safe to venture a prediction that China and Japan have a great industrial future. This safe to venture a prediction that China and Japan have a great industrial future. This safe to venture a prediction that China and Japan have a great industrial future. This safe to venture a prediction that China and Japan have a great industrial future. This safe to venture a prediction that China and Japan have a great industrial future. This safe to venture a prediction that China and Japan have a great industrial future. This safe to venture a prediction that China and Japan have a great industrial future. This safe to venture a prediction that China and Japan have a great industrial future. This safe to venture a prediction that China and Japan have a great industrial future. This safe to venture a prediction that China and Japan have a great industrial future. This safe to venture a prediction that China and Japan have a great industrial future. This safe to venture a prediction to the duties of sasociation in the office of the Sector five the great the great future the great railroad law, on the 22d day of May, 1878. Four days later the articles of association in

must be obtained, are very careful in derful powers of adaptation and imitation,

have entire confidence in the plan pro- of the Chinese artisans in connection its main line 9,088,103 passengers, and posed, in the honesty and intelligence of with gongs, fire crackers, curious con- 9,118,419 tons of freight. The cost of the persons to whom its execution will be centric ivory balls, grotesque crockery operating the road is calculated at 58.49 entrusted, and in the prospect of large ware, absurd tea caddies, and the per cent. of the gross earnings, and the net enough earnings to pay interest on the like. It was only when the phantom surplus for the year, after paying dividends, capital invested. No plan for which a of "Chinese cheap labor" gave rise to taxes, etc., is \$3,199,493 49. The New special charter has yet been secured has conflicting hopes and fears among all Jersey lines controlled by the company fulfilled these conditions, hence none of classes in this country, that we began se- carned \$8,700,969 36, and cost 69 26 per them have ever had the remotest chance of riously to consider what the Chinese were cent. of this amount to operate. good for. The threatened tidal wave of The loss to the company on the At last, however, the problem has been Mongolian immigration never broke upon New Jersey lines, after paying the guarattacked in the right way, and if we do not our Pacific shore, and probably never will, anteed interest dividend, was \$31,161. have a steam railroad connecting the lower for the Chinese are a people who do not Deducting this from the net earnings of readily expatriate themselves; but during the main line, we have a net profit to the sonable time, it will be because those whom and since the cheap labor scare we have Pennsylvania Company of \$3,168,332.49 as we have elected to govern us do not want learned that a Chinaman is useful for al- the surplus for the year. Of the floating most any work he may choose to under- debt \$2,688,450 has been paid during the take. Great expectations of unlimited inthe importance of quick transit within our dustrial expansion and unprecedentedly ing \$4,000,000 during 1875 by the sale of cheap production, were based by sanguine statisticians upon the promise of his com- which are no longer important to the coming to this country: what is to hinder pany. enact a general law authorizing the build- him from realizing these expectations for ing of steam railroads in cities. This law himself and in his own country? The pa- the Pennsylvania management in future shall provide that the mayors and city tient, skillful and, withal, cheap labor will be directed to the development of the which awaits more diversified and useful system now owned or controlled, and that sioners to survey and decide upon routes, employment in China and Japan is a po- no new lines will be acquired or leased, tentiality of cheap production which must with the exception of a few unimportant not be left out of account in estimating the local roads, which may be found useful as privileges, shall be sold at public auction to probable future of the world's trade. To feeders to the main line. We think this is the highest responsible bidder. If such a law this must be added the varied natural re- a wise determination. The indefinite exis enacted and a route decided upon in this sources of those countries, including a pansion of a corporation of this kind may city, the petitioners pledge themselves to supply of fuel of excellent quality, a soil be attended with serious danger to the best bid for it when offered for sale, and to which may be made to produce all the interests of the stockholders and the pubplace themselves under forfeiture and agricultural staples, a climate as good lic. The system of roads now controlled as our own and in many respects bet- by the Pennsylvania Railroad Company is operated without delay. This is "talking ter; and it becomes evident at once as vast as any one board of directors can business." The petitioners are gentlemen that Chinese and Japanese nations have keep well in hand, and while Mr. Scott no as yet contributed little to the world's doubt has a wonderful talent for expansion sibility, who have never before taken the production of useful commodities in pro- and organization, it might be difficult to initiative in this movement for the reason portion to their capacity. It only needs fill his place with one who could properly that they would never bring themselves to the directing intelligence of Europeans and control the management of so great a systhe dirty work of lobbying a special bill Americans to organize a vast industrial tem. through the legislature by the corrupt system in China and Japan which would means which it has hitherto been neces- make those countries the producers of manufactured articles in countless variety been put to such legislation by the new for every market of the world. The constitution. Rapid transit can only be modernizing of Chinese and Japanese secured under a general law applicable to civilization is progressing with remarkable every city of the State, and to such a law rapidity; the popular opposition to the introduction of railways, telegraphs, mabe urged. We hope the mayor will take chinery, foreign manufactures and Western ideas, born of a conservatism resulting that he has an interest in the true welfare from long non-intercourse with other naof the city by using such influence as he tions, is giving way more easily than was can command to secure the passage of the at first supposed possible; the progress already made by foreigners in the introduclected, we may expect that the gentlemen tion of their arts and sciences rests upon the substantial foundation of the favor and forward and promptly discharge the obli- appreciation of the intelligent classes; and as progress begets progress, we may exwork thus undertaken would at once com- pect to see marked changes in both countries during the next ten years. One of gincering work which has been undertaken in ital could be secured without difficulty, these will doubtless be the establishment this neighborhood for many years. The purof manufactories by foreigners for the pose is to construct a tunnel from Jersey blessing we cannot hope to secure in any fabrication of articles for export. If the Chinese can make iron why should they not shape and fashion it into any form which may render it useful at home or abroad : if Why should not China become, in the they can manufacture fire arms in arsenals near future, a great producer of iron for with native labor, why should they not in New York with a capital of \$7,000,000, and export? The question is an interesting make cutlery and hardware of all kinds for another in New Jersey with a capital of \$3,000, one, which may be answered sooner than home consumption and for export? We 000, making a total capital of \$10,000,000. The we had expected. It has long been known doubt if production can be carried on as that China has a wealth of undeveloped cheaply in any other countries of the world. coal and iron which must some day be util- and wherever good labor and abundant ized, and now that a beginning has been materials of excellent quality can be had made in iron manufacture, the development cheapest, there will capital find its way for

During the year the company carried on year, and it is proposed to pay the remainsecurities held to control certain roads.

The report announces that the policy of

We print in another column the full text of the new tax and tariff bill as it passed the Scnate on Tuesday night. The first effect of the new law upon the prices of imported manufactures of iron and metals will be seen by consulting our trade reports and quotations of prices current.

#### The Hudson River Tunnel.

While our people are watching with interest the progress of the undertaking which has for its object the tunnel of the English Channel bed, but little interest has been felt or expressed in a work of much more importance to us, the construction of a tunnel under the Hudson River, between New York and Jersey City. This tunnel, upon which work has already been begun at the foot of Fifteenth street, Jersey City is the most important en-Avenue, Jersey City, under Fifteenth street to the river, then under the river bed to the foot of Christopher street, New York, and thence to its projected eastern terminus at Broadway and Tenth street. The work is to be done under the supervision of two companies one New York corporators, among whom are Wilham Martin, George F. Seward, C. Goddard, A. C. Foster, William J. Osborne, C. H. Dearing, G. H, Clowes, A. A. Selover, Albert B. Gibbs, J. Tucker, Ira A. Kipp, George A. Thaver, A. A. Roberts, and others, filed their mission from the authorities of certain provinces of China to procure the necessary man chinery and plant for mining coal and iron rows and manufacturing iron; also, to engage competent persons to superintend the mining and smelting operations. The object of this undertaking is to supply the Chinese market with iron cheaper than it can be imported from England. The Jene of this undertaking is to supply the Chinese market with iron cheaper than it can be imported from England. The Jene of this undertaking is to supply the communication of the communication of the communication of the province of Chini, and nodering on the contrast of the province of Chini, and nodering on the contrast of the province of Chini, and nodering on the contrast of the province of Chini, and nodering on the contrast of the province of Chini, and nodering on the contrast of the province of Chini, and nodering on the contrast of the province of Chini, and nodering on the contrast of the province of Chini, and nodering on the contrast of the province of Chini, and nodering on the contrast of the province of Chini, and nodering on the contrast of the province of Chini, and nodering on the contrast of the province of Chini, and nodering on the contrast of the province of Chini, and nodering on the contrast of the province of Chini, and node of

provided that the road so constructed underneath the surface, shall be fifteen feet below the surface, and in no way interfere with any necessary use of such land, by the corporation owning the same, for the purposes of their franchises. The bill also provides for the proper condemnation of the land necessary for the construction of such underground railroad, The proposed amendment, while introduced at the instance of the Hudson River Tuanel Company, will accrue to the benefit of any commony who may hereafter see fit to embark in a similar undertaking. So far from abridging or making any exception to the general operation of the law, it enlarges its scope. The bill has been favorably reported by the committee, and been favorably reported by the committee, and is on the clerk's desk in the lower house await

been favorably reported by the committee, and is on the clerk's desk in the lower house awaiting a second reading.

The tunnel upon which work has been thus commenced is to be 24 feet high and 26 feet wide, inside measurement. At the water's edge, on the Jersey shore, it is to be about 35 feet below the surface, and at the point where it will strike the New York city shore line it will be 45 feet below. When it shall have been finished it is to be fitted up with double tracks, and trains will be run over them at regular intervals for the accommodation of passengers. Flat cars are to be provided for the transportation of horses and wagons and other vehicles, and much of the freight from the great railway companies who own the shore front will be transported through it. Its wall is to be of brick, and will be three feet in thickness.

When the river shall have been reached, it is

When the river shall have been reached, it When the river shall have been reached, it is proposed to carry it on to completion by the construction of what, in tunnel architecture are known as "locks"—ar-tight passages, is which the pressure of the air will be sufficient to resist the pressure from the outside, until the walls shall have been completed. The excapation is to be accomplished through the agency of an air-tight tube. The pressure of the air sexpected to remove all the earth taken from the tunnel with the rapidity with which lifted men could shovel it into cars, and it is to be carried, by the same natural agent, through tube to the surface, thus saving the expense of laborers and of transportation upon cars.

#### The New Tax and Tariff Bill.

The following is the full text of the new Tax and Tariff bill as it passes the Senate on Tuesday night :

Be it enacted, &c., That from and after the date of the passage of this act, there shall be levied and collected on all distilled spirits hereafter produced in the United States a tax of after produced in the United States a tax of ninety cents on each proof gallon or wine gallon when below proof, to be paid by the distiller, owner or person having possession thereof, before removal from the distillery bonded warehouse; and so much of section 3251 of the Revised Statutes of the United States as is inconsistent herewith is hereby repealed.

SEC, 2. That section 3368 of the Revised Statutes be and the same is hereby amended by striking out the word, "twenty cents a pound."

staking out the words "twenty cents a pound," and inserting in lieu thereof the words "twenty four cents a pound;" Provided, That the increase of tax hercin provided for shall not apply to tobacco on which the tax under existing law shall have been paid when this act takes effect. That section 3394 of the Revised Statutes of the United States be amended by striking out "five" wherever it occurs, in that section, and inserting "six" and by striking out "fifty" and inserting "seventy-five." Provided further, That whenever it shall be shown by testimony under oaih, to the satisfaction of the Secretary of the Treasury, that any per son liable to pay the increased tax upon tobacco, eigars or cigarettes by this act imposed had, prior to the 10th day of February, 1875, made a contract for the future delivery of such tobacco, cigars or cigarettes, at a fixed price, which is a convention of the test of the test of the state of the test of the state of the price, which conventions are the state of the striking out the words "twenty cents a pound tobacco, cigars or cigarettes, at a fixed price, which contract was in writing prior to that date, such tobacco, cigars or cigarettes may be delivered to the contracting party entitled thereto under special permit from the Commissioners of Internal Revenue provided therefor, without previous payment of such additional tax; but the said additional tax shall be a lien thereon, and shall be paid by and collected from the purchaser under such contract before the sale or removal thereof by him, and when demanded by the collector of internal revenue for the district to which the same shall be removed for delivery to the purchaser; and any obacco, cigars or cigarettes, at a fixed price for the district to which the same shall be removed for delivery to the purchaser; and any sale or removal by such purchasers, prior to the payment of such tax, shall subject him and the tobacco, cigars or cigarettes so sold or removed to all the penalties and processes of law provided in the case of tobacco manufacturers so selling or removing tobacco to avoid the payment of tax.

Szc. 3. That on all molasses (not including tank-bottoms, sirup of sugar, sugar cane juice, melado, or concentrated melado) and on sugars.

melado, or concentrated melado) and on sugars according to the Dutch standard in color, im

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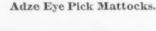


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#### The Law of Patents.

by the courts in patent cases during the past year will be found of interest to a very large class of our readers :

ABANDONED EXPERIMENTS.

If an alleged prior invention was only an excannot prejudice a patent for a similar improvement obtained by a subsequent inventor.

[Brown vs. Guild, 392; Brown vs. Selby

subsequent patent for a successful machine, however closely they resemble each other.

vs. Ashland Machine Co. et al, 982. A patent will not be set aside upon the mere testimony of a single witness that many years ago he saw a machine like the one described; it must be regarded at most as an abandoned

[La Baw et al. vs. Hawkins et al., 724.

plication filed April 7, 1864, sustained upon evidence of the applicant's poverty and efforts, been twice rejected in 1855, and by the Comfused in 1859, and although the invention had actual use. gone into public use in 1860.

The Goodyear Dental Vulcanite Co. et al va.

An invention held to have been abandoned to the public when the author, after having reduced it to perfection and actual practice, took suffered the molds to be lost, and meanwhile others, independently of him, reduced it to practice and introduced it extensively into market. It is not necessary that the latter should obtain a patent. It is enough if they have reduced the invention to practice, and it has gone into use.

The Consolidated Fruit Jar Co. vs. Wright,

The first inventor does not lose his right in such case in consequence of the mere lapse of time, but because the circumstances indicate an intention of abandonment, and because the rights of others have intervened

The Consolidated Fruit Jar Co. 88, Wright,

A patentee cannot be charged with having abandoned his invention because his solicitors without his knowledge, neglected to file his application in the Patent Office for more than two years after it had been sworn to, and was in all respects complete.

[Birdsell vs. McDonald et al.; Birdsell vs. the

Ashland Machine Co. et al., 682.

in good faith, for more than two years before The following digest of decisions rendered applying for a patent. The objection is not one to be regarded with favor; but, if clearly established, it is fatal.

[Birdsell vs. McDonald et al.; Birdsell vs. the Ashland Machine Co. et al., 682.

Delay in filing an application is no ground periment, never perfected, but abandoned, it for charging the inventor with abandonment if he was residing in the insurrectionary States

during the war. [Knox et al. vs. Loweree et al., 802.

Imperfect and crude descriptions of an inven-Machines which have been abandoned after tion imparted to others are no evidence of formed in immediate succession it is sufficient. being experimented upon do not prejudice a an intention to abandon it. Neither is the use of an invention for the purposes of experiment, though made in public from necessity. [Birdsell vs. McDonald et al, 682; Birdsell Neither does such use debar from a patent, although it takes place more than two years before the application.

[The Locomotive Engine Safety Truck Co. vs. the Pennsylvania R. R. Co., 927.

When two years have elapsed after the alexperiment, no second machine having been lowance of an application without the payment of the final fee, it cannot be renewed under section 32 of the act of 1870, but is ab-ADANDONMENT.

A patent issued June 7, 1864, upon an apthe commissioner has no power to revive it. solutely abandoned under the 45th section, and [Robert McCully, 158.

A patent is void if more than two years bealthough he had filed a previous application fore the application for it was filed the patentee ing from the arms of rotating reels being both for the same invention May 14, 1852, and it had had sold the patented articles for the double well known, it seems that a patent for a compurpose of realizing the proceeds and of seeing missioner in 1856, and a rehearing had been re- if they would sell, and others had them in

The Consolidated Fruit Jar Co. vs. Wright

327. ARTICLES OF MANUFACTURE.

In order to sustain a patent for a manufacture it is essential that invention or discovery must have been exercised in producing it. It no further measures with it for nine years and is not enough that it is a new article of com-

[The Milligan & Higgins Glue Co. vs Upton,

ASSIGNEES

Where the assignees of the inventor filed and completed their application for a reissue before July 20, 1870, it was held that their oath to it was sufficient without that of the inventor.

for the reissue of a patent originally issued be- with, the exit sperture of the blast pipe, &c.; cost was. fore July 8, 1870; the oath of the inventor is and it was held that the invention consisted in required only when the original patent issued the combination so operating that the sparks to their officers who superintended the work of colored puddlers to this city, and to con-

[The National Spring Co. vs. The Union Car. Spring Manufacturing Co., 234.

Where a patentee disclaims so many elements had been known before, in which the current their pay. of his invention as to leave no room for the driving the sparks was not continuous, but exercise of invention in forming the combin- interrupted. ation which he claims, it is of no avail for him to show that he was really the first inventor of a bell shaped deflector, turning the sparks into An invention will not be held forfeited be - all or any of the parts thereof.

The summary of the patentee's claim, usually annexed to the specification, admits that all that is not included is old, and it is a sufficient compliance with the law requiring the new to

be distinguished from the old.

A combination is legitimate when all the elements co-operate in producing a result, and are necessary to it, though their several func tions are not performed simultaneously; if per-[Birdsell vs. McDonald et al., 682; Birdsell vs.

The Ashland Machine Co. et al., 682. If any one uses all the elements of a patented ombination except one, and, instead of that, mploys what was known at the date of the element, he is liable for an infringement of the from the furnace into the bread chamber. But he is not liable if he uses any other substitute, or even an old one, which per-

forms a new function. A combination of four elements is not the

[Gill vs. Wells, administratrix, 881. The direct radiation of heat into baking chambers, and the use of bread holders swing

bination of the two cannot be sustained

CONSTRUCTION OF CLAIMS.

A claim for "mounting the attendant upon a he can see the marks made on the ground, and ment, the plaintiff should recover all the prooperate the dropping of the seed accordingly" fits the defendants have made out of it; but if forth," and the means are described in the made in their favor. specification; it is no longer open to the obiection

Brown vs. Hatch, 392; Brown vs. Selby et al., no such proof no deduction will be made.

In a patent for a spark arrester and con-[The National Spring Co. vs. The Union Car of the compound blast pipe with a spark or shows that they paid more than it was worth. Spring Manufacturing Co., 224.

The communicating with the fire chamber of ber, provided with a bell shaped mouth, which lowed the cost of introducing any improvea continuous current without resting.

Such a claim is not void for want of novelty

an annular chamber which surrounds the blast and having reason to suppose that they were Pacific Railroad,

alent of the hell mouthed return flue described in the patent.

An apparatus embracing such an equivalent

tinuous action of the compound blast. Hike es. The Providence & Worcester R. R.

to be "one or more swinging bread holders cover in a suit for infringements. suspended from the arms or end plates of a rotating reel, in combination with a furnace, so arranged and connected that the products of combustion pass into or through the chamber in which the bread holders move," must be inpatent to be a proper substitute for the omitted terpreted to claim the direct radiation of heat

Where the application upon which an original patent was granted relied upon heating the external walls of the bread chamber, or circulating through its currents of hot air, and con same invention as a combination of three of tained no reference to such a direct radiation them without the fourth. bracing such a claim as the above is void.

[Ball vs. Withington et al, 933; Ball vs.

Bailie, 933. DAMAGES.

[Ball vs. Withington et al.; Ball vs. Baitie, infringement of a patent, except the actual profits made by the defendants from the use of the plaintiff's patent.

If the plaintiff's patent covers all that is seed planting machine in such a position that meritorious in what constitutes the infringeis void as a claim for a result irrespective of they used other improvements, which increased the means of accomplishing it. But if qualified the value of the production and enhanced their by the words "substantially as herein set profits, a corresponding reduction should be

It belongs to the defendants to show the value of such improvements: if they furnish

They will be allowed to deduct the royalty they paid for the use of a patented improvesumer, the first claim was for "the combination ment which they used, unless the plaintiff

the assignees is sufficient upon an application is located above, adjacent to and coincident ment if they furnished evidence of what the Reasonable salaries paid by the defendants

> were driven into and through the return flue in should be deducted from the profits charged to them. They should not be charged for the profits

through the boiler into the fire box, is equiv-alent of the bell mouthed return fluc described store what they have made by the use of the plaintiff's property.

The defendants in a suit for infringing can is an infringement of the patent, although the have no allowance made them on the ground flow from the blast ripe is re-enforced by a that they might have used other improvements [Brown vs. Hatch, 392; Brown vs. Setby, 392. current of air from openings in front of the with as much profit as they made out of the smoke arch, if the sparks are driven by a con- plaintiff's invention.

If patentees have been accustomed to grant licenses for the use of their invention, the Co. et al., 575.

A patent in which the invention is specified for estimating the damages they should re-

> If a territorial assignce has agreed with the owners of a patent that he would license others, for a stipulated royalty, to use the invention where he was prevented from it by municipal regulations, he is not to be restricted by the amount of such royalty in estimating the damages he should recove. from infringers, if through their management the regulations were made which prevented his doing the

Where a territorial assignee had agreed with the owners of a patent that he would license others for a stipulated royalty to lay down the pavement embraced in the patent in any place where he was prevented from laying it himself, either by judicial decisions or because the law No damages can be recovered upon a bill in der: Held, that his being prevented by a law chancery brought before July 8, 1870, for the giving the adjacent property owners the right to select the pavement did not come within the terms of the agreement, and that the stipulated royalty formed no criterion for estimating the damages to be recovered for laying the plaintiff's pavement in the place. Where it does not appear from the master's

report that there was evidence before him to sustain a charge which he has allowed, it will be stricken out.

[The American Nicolson Pavement Co. vs. Elizabeth City et al., 764.

#### The Puddlers' Strike.

PITTSBURGH, PENN.-Mar. 1.-Two thousand puddlers, boilers, and helpers held a meeting in the City Hall to-day with closed doors, excluding representatives of the press. It has transpired that this meeting was for the purpose of considering the question of the importation of colored puddlers and the matter of continuing the lock out. It was resolved to make preparations to prevent the bringing tinue the lock out until 86 per day is paid. Several mill owners are making arrangements to bring colored puddlers from Richmond and

Such a claim is not void for want of novelty in the invention, although similar apparatus had been known before, in which the current driving the sparks was not continuous, but interrupted.

A cone and deflector, constituting, together, a bell shaped deflector, turning the sparks into

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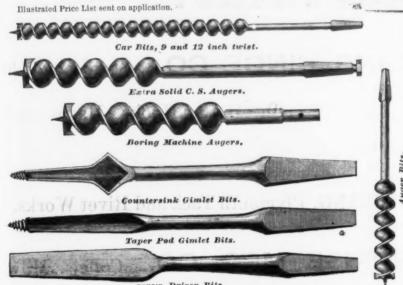
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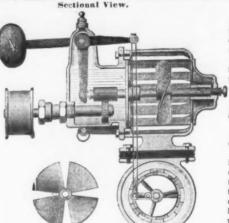
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#### Boiler Explosions.

From the report of Mr. R. B. Longridge, the chief engineer of the Boiler Insurance and Steampower Company, Limited, we learn that the umber of explosions and loss of life in Great number of explosions and loss of life in Great
Britain from that cause during the past year is
above the average, the total number of boilers
blown up having been sixty-eight, and the
number of lives sacrificed seventy. The numbers in mines and iron works were respectively
twenty-five and twenty-nine, and twenty-six of
the boilers were cylindrical with horizontal internal flues, causing the loss of forty of the
lives.

ZEAL, WISDOM, PLUCK AND ABILITY,
which has created so great a success; and then
a compromise was effected by which several of
the new directors resigned, and members of the
old board elected in their places.

As now standing, the board is substantially
as before the election of the 10th. The company to-day is stronger in every particular than
ever in the past, and our people may rest assured that the mills will keep on running, and
no fears need be entertained for the results.

W. S. BROOKS,
Director in Joliet Iron and Steel Company.

The most destructive explosion of the year, observes Mr. Longridge, occurred on Monday morning, the 2d March, in Blackburn, two boilers insured by this company exploding at the same time, destroying the boiler house, engine house, taping room, and end of the weaving shed, causing the loss of eleven lives, and serious injuries to a great number of work people. As the boilers had only worked about ten months, and were apparently in good condition immediately before the explosion, great anxiety was naturally felt as to the cause, it being well known that many similar boilers were in regular use, working at un equally high pressure. The day after the accident, Mr. Longridge visited the scene of the accident, and after a careful and prolonged examination came to the conclusion that the explosion was solely attributable to unequal expansion, owing to the steam having been raised too rapidly, the water at the bottom of the boiler remaining comparatively cool, while the plates at the top attained the same temperature as the steam, or about 316° Fah. Assuming the temperature of the water below the flues to have been 100°, and that of the plates in contact with it the same, the difference between this and 316° or 216°, divided by sixteen, gives 131/4 tons per square inch as the force of expansion tending to produce rupture, in consequence of the difference in temperature between the upper and under sides of the boiler. The explosion at Blackburn was evidently attributable to this cause. The upper surface of the shell of each boiler being exposed to the heated gases, would expand much more than the lower surface; the latter must consequently have been subjected to an excessive strain, which ultimately resulted in the rupture of No. 2 at the fourth circular seam from the back end, and on this taking place, the pressure of 80 lb, per square inch was quite sufficient to complete its destruction. No. 1 boiler being similarly strained, was una ble to withstand the shock caused by the explo sion of No. 2, and exploded immediately afterward. In short, the primary, if not sole cause of explosion, was the excessive strain to which the boilers were subjected from unequal expansion, owing to overheating of the upper sur face of the shell in consequence of the object tionable arrangement of the external flues. After two or three adjournments the inquiry was brought to a close on the 20th May, the jury finding a verdict of "Accidental death," attributing "the primary cause of the explosion to "the principle of flueing boilers over the top," and adding the following remarks: "We regard that mode of setting boilers as decidedly bad and objectionable, and we strongly recom mend all users of steam-power, whose boilers are set in this manner, to alter the same at once." Many firms have since acted upon this recommendation, but others, not being convinced that this mode of setting is a source of danger, and believing that it effects a saving of fuel-which in some cases it may do, especially if the boilers are liable to priming-have made no alteration, thus taking upon themselves a serious responsibility.

Mr. Longridge details certain experiments subsequently made by him to ascertain the strongest form of riveted joint, and the proper size and pitch of the rivets. 'His conclusions differ considerably from those arrived at by the late Sir W. Fairbairn. Previous to the Black burn explosion, he says, the accuracy of Sir W. Fairburn's figures does not appear to have been questioned, but the experiments since made have proved them to be incorrect, and show that the strength of boilers is considerably less than has hitherto been supposed, the bursting pressures having been calculated on the assumption that the strength of a single riveted joint was 56 per cent. and a double riveted 70 per cent, of the strength of the solid plate, as stated by Sir W. Fairburn, who appears to have fallen into this error from mak ing his experiments with narrow strips of plate from 3 inches to 31/4 inches wide and barely 1/4 inch thick, with rivets % inch or 16 inch dian eter, and then assuming that the result would be the same with thicker plates and larger rivets, which is not the case. It is important therefore, that this should be generally known as many boilers are now working at much higher pressures than they are fit for

#### The Joliet Iron and Steel Company.

Hon. W. S. Brooks publishes the following card:

CARD TO THE PUBLIC.

There has been within the past few days some apprehension on the part of our people regarding the future of the rolling mills:

The perfectly prostrate and dead condition of the mills, when taken charge of by the board of directors elected in August last, is well known.

The very great success attending the efforts of the board is also well known; but the time, labor, difficulty and embarrassment through which that success has been obtained, only of the bo

those who have taken any part in the reorganization can know.

Because of many rumors reflecting upon the management of the mill since October last,

against the old one-and did so by a commit tee. The committee unanimously reported that they found all accounts, books and everything straight and honest, and a correct condition of things of which they had been charged. They also passed a resolution recognizing the

ZEAL, WISDOM, PLUCK AND ABILITY,

Director in Joliet Iron and Steel Company. February 13, 1875.

Burning of the Cliff Works, Scranton On the 27th ult. the extensive locomotive shops known as the Cliff Works, situated south of the Delaware, Lackawanna and Western Railroad passenger depot at Scranton, and owned by the Dickson Manufacturing Company, took fire and were completely destroyed. The buildings contained very valuable ma chinery; also three new locomotives just com pleted and materials to put together 11 others The loss is not less than a half a million dollars, on which there is an insurance of \$185,000, principally in New York companies. Two hundred and fifty men are thrown out of em ployment, some of whom lost their tools in the building. The fire is supposed to have acci dentally started in the office, and had gained great headway before it was discovered by the watchman, a new hand, put on yesterday, the regular watchman being sick.

Cheap Mode of Water Supply .- The circumstances under which a small village in the south of France obtains its water supply may not be without interest in these days of sanitary engineering. This little community of 1400 souls dwells on a hill, which on the side of the water source is 775 feet above the plain. A turbine worked by a canal with a fall of about 7 feet, discharging a cubic meter per second forces the water in a channel not far from the perpendicular to the required elevation. The village of St. Lazare, not far from St. Remo, is thus supplied with 60,000 gallons of excellent water daily, and at a cost of £80 a year or thereabouts.

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300 Oak Piles, 50 feet long. 350,000 feet Spruce Lumber, mostly dimensions vary ing from 2x6 to 10x12.

small Draw Bridge, 30 feet long, first-class narrow gauge Passenger Cars.
Open
Smoking Baggage Cars.

2 Box 2 Platform " 4 first-class Locomotives, 10 to 12 tons weight 2 moderate sized Ferry Boats, exclusively for All of the above to be of the very best quality.

Apply at the Office of the Company. 38 Congress Street, Boston.

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By BISSELL, WELLES & MILLET, Store No. 94 Reade Street. Our REGULAR SALES of HARDWARE, CUT

ERY. FANCY GOODS, &c., will be held on TUES-DAYS and FRIDAYS throughout the sea CASH ADVANCES made on CONSIGNMENTS with

#### DROP FORGINGS.

The TRENTON VISE & TOOL WORKS, Trenton N. J., having increased their facilities, are now abit to do all kinds of

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By an experienced man, a situation to superintend the Practical Department of a Rolling Mill. One who understands the cetting up of fine grained iron, und all kinds of puddled tron for all purposes; also cosessener steel. Has had large experience in managing works in England. Is a practical iron worker, tefers to Mr. W. Gill, Managing Director Teeside ron Works, Middlesboro', England; Mr. W. H. frown. Blackhouse, Upper Thorpe, Sheffield, England. Address RICHARD JONES, Care FOXELL & JONES, Troy, N. Y.

#### Chilean Exposition.

A gentleman visiting this Exposition in charge of a hardware specialty, desires to make arrangements to represent another business of worth and merit. Best reference given to Hardware and Iron Mer "EXPOSITION," Office of The Iron Age, 10 Warren St., N. Y.

accustomed to the computation of strains in struc tures, and to the use of all varieties of engineering instruments, of experience in testing the strength of LARGE PROPORTIONS, and at the election on the 10th instant, developed so great a strength as to defeat the old management and elect a new board. This new board were directed to examine into the charges

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The undersigned give notice that they are the owners of a patent for a Screw Cutting Die, issue to John J. Grant, Oct. 24, 1871, and that all infringements on said patent will be promptly prosecuted.

Wiley & Russell Mfg. Co. GREENFIELD, MASS., Feb. 12, 1875.

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By a responsible party, with cash means, whole or part interest in an established concern, Hardward Stoves or Iron. Party has been in a New York jobbing house, and in retail trade West. Western town preferred. References first-class. Address with full particulars, amount of sales, profits, expenses IRON, P. O. Box 100, Chicago.

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By an energetic man, a position with a first-class couse (iron preferred). Competent to take charge and manage a business. Six years' experience as manager at Charcoal and Anthracite furnaces. Thor oughly conversant with bookkeeping. Frst-class BUSINESS. P. O. Box 702 Pottsville, Pa.

#### Wanted.

By an experienced man, who has a large acquaintance with the wholesale and retail hardware and house-furnishing merchants thoughout the West, a position as traveling salesman. Can furnish good city references. Address.

P. A. C.,
Office of The Iron Age, 10 Warren St., N. Y.

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For the sale of Hardware or any Mercantile Business. Parties desirous of going into business cannot do better than to address this agency. Also clerkships secured, best of reference required. Parties wishing clerks or assistants, please address this agency. Hardware stores for sale and wanted. Stamp inclosed insures answer.

Address, JOHN I. HARING,
HOX 1633. Binghamton, N. Y.

#### HARDWARE.

FOR SALE in the best business part of Jersey City, a first-class Tool and Hardware business Established about 25 years, and doing a fair business Apply to H. LUTIGEN.

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Having during the past 10 years constructed and put in operation a number of the most successful Charcoal Blast Furnaces in the country, and having a competent corps of workman constantly in my employ. I am enabled to offer advantages in to constructing or remodeling upon the latest and most approved plans.

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desirous of introducing their goods to the British and Continental Markets, are advised to inser advertisements in the newspaper "IRON," pub lished every Saturday, at 99 Cannon Street London, E. C. SCALE : First 3 lines, 3/; every additional line, 10d

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Scrap Iron & Metals, Machinery, Tools, Shafting & Pulleys, Steam Engines, Pumps & Hollers, Copper, Hrass, Tin, Babbit Metals, Foundry Facings. Best Quality Ingot Brass.

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A situation as bookkeeper or cashier of an iron works, a hardware business, or in the coal trade. which the advertiser understands in all its branches Highest references of character, capacity, &c.

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#### Special Notices.

#### SPECIAL NOTICE.

I have three patents for Dies, Machinery, and To or making Augers and Bits, each running sevente ears; dated as follows: Dec. 19, 1865; January years; dated as fellows: Dec. 19, 1865; January 31, 1866, and July 3, 1866, There is a special cloim on each of the Dies. All persons infringing on said patents will be held responsible to the extent of the law. ringing on said patents will be need resconsible he extent of the law.

Russell Jennings.

Deep River, Conn., Sept. 7, 1874.

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by the 1st of January, 1875, in an established Hardware business, who can put in from \$20,000 to \$25, 000, either cash, or stock suitable for jobbing trade. For particulars, address, B.,

Office of The Iron Age, 10 Warren St., N. Y.

OFFICE OF H. A. ROGERS, 19 JOHN ST., } NEW YORK, January 20th, 1875. The Firm of H. A. ROGERS & CO., 50 and 52 John Street, is this day dissolved by mutual consent, H. A. Rogers retiring New York, January 18, 1875.

In calling your attention to the above notice, I beg to say that I will continue business in my own name and for my own account at No 19 Jobn Street, where may be found a complete stock of Railway, Mill and Machinists' Supplies.

H. A. ROGERS.

THOROUGH PRACTICAL MECHANIC A wants a situation as draughtsman or charge of a machine shop. Can give the best of references. ENGINEER, Box 5. Office of The Iron Age, No. 10 Warren St., N. Y.

#### Merchant Iron or Nails

Wanted in exchange for 300 tons No. 1 Wrough Scrap Iron.

GILCHRIST & GRIFFITH,

Mount Pleasant, Iowa

#### STERLING IRON & RAILWAY CO., **STERLING ANTHRACITE PIGIRON**

FOR FORGE AND FOUNDRY USE.

#### MAGNETIC IRON ORE

FOR BLAST AND PUDDLING FURNACES.

The Light, Handsome Office A. W. HUMPHREYS, Treas. 42, PINE ST., N. Y.

for Sale, &c.

#### Hardware Store For Sale

Will sell on good terms (no bonus)

One of the best appointed Hardware

Stores in the West, Located in a Growing Manufactur ing Town of 12,000 Inhabitants, Doing the Leading Business.

Present Stock about \$11,800, all fresh and nicely sampled in boxes. With a small additional capital a business of \$80,000 a year can be done

Must be sold by April 10th.

HARDWARE,

#### Box 1922, Eau Claire, Wis.

For Sale. STEEL CASTINGS,
Solid and Homogeneous, guaranteed to stand a Tensile
Strain of 25 tons per square lich. An invaluable substititation of 25 tons per square lich. An invaluable substititation of 25 tons per square lich. An invaluable substititation of 25 tons per square lich. An invaluable substititation of 25 tons per square lich. An invaluable substititation of 25 tons per square lich.

A good Wagon Factory, in Central Iowa; shops,
22x80 and 20x40; on a good railroad; with or without
material. 140 wagons sold last year in the town, and
good facility to increase the business to 20 or 30
quired. Office, core. Eveling and Levant Sts.,
Send for Circular and Price List.

ED. MEISKER.

Dexter, Dallas Co., Iowa

#### For Sale.

A Zine Mill, consisting of Rolls, Furnaces, Shease and Tools, all in complete order, ready to run at once. Situated near New York on leased ground, Lease covers buildings, engine and boilers, and is a valuable one, having privilege of extension. For full particulars, address, Box 2166, N. Y. P. O.

## Steam Forge For Sale.

The whole or a half interest. Address "STEAM FORGE."

> Room 31 No. 5 Beekman Street, New York City

> > R. L..

#### Hardware.

FOR SALE .- A thriving Hardware and Agri ultural Business. One of the best locations in Western Massachusetts. Ill health only cause for selling. Address

Office of THE IRON AGE, 10 Warren St., N. Y FOR SALE.

#### At Lowest Manufacturers' Rates, GUNS & SHEET ZINC.

Best German and Belgian Brands, By LOUIS WINDMULLER & ROELKER, 20 Reade Street, N. Y.

#### For Sale, &c.

Machinery For Sale.—Five Foundry Crancs, 10 20 tons; two Cupolas, to line 5 ft. and 40 in.; one Plat-Saw; 4000 lbs. Shafting, etc.; one Railwa Apply to Henry S. Bellows, 26 Court St., Brooklyn, N. Y.

#### MACHINERY FOR SALE.

The following machinery, &c.. being that recently

American Rolled Nut & Tube Co., t very low prices. Consisting of several sets of ROLLS, HOUSINGS, BED PLATES, &c.,

for Rolling Nuts, including machines for finishing,

8 in. Guide Rolls. Large quantity of

Rolled Nuts for Bolts,

from 1% to 2 in diameter, reamed and burred ready

#### STANDING PLATES.

These nuts have been extensively used, and are regarded as equal to any made, and will be sold much under the market value. Will also sell a

Fourth Interest in the Patent for mak. ing these Nuts. It is confidently believed that nuts can be made on

this plan cheaper and better than on any other yet adopted, and may be rolled of any length or size that may be required. All of the above machinery is early new and in complete order. For further information, apply in person or by mail to

N. C. NEWTON, Metropolitan Iron Works, Richmond, Va.

#### FOR SALE.

An % inch mill train for making Merchaut, Band and op Iron. Will be sold cheap.

W. W. JONES. Apply to Near the Lehigh Valley Railroad Depot,

#### For Sale or Rent on Easy Terms.

A four story brick factory 46x60 ft. with unfailing water power of about 25 norse-power, auxiliary steam engine of 30 horse-power. Adjoining are office, barn and other outbuildings. Situated near depots of three railways, and lines of boats to New York and Philadelphia. Every facility for manufacturing and getting goods to market at cheapest rates. Apply in person or by letter to either

JOSEPH W. ALSOP, ROBERT N. JACKSON, CHARLES E. JACKSON, MIddletown, Conn.

Allentown, Pa.

#### To Stove Manufacturers and Foundrymen.

The Carbon Stove Company,

Of Burlington, N. J., Will sell their Foundry, with all its appurtenances, business and good will, upon very liberal and accommodating terms, offering to any party wishing to engage in the Stove or general Foundry Business a rare opportunity.

The Foundry Buildings, which are of a capacity to employ forty or more molders, are very conveniently located upon navigable tide water on one side, and the Pennsylvania Railroad, with its freight station in front, being on the direct line between New York

and Philadelphia.

The Buildings, Machinery and Appliances are all in prime order, and the assortment of Patterns, &c., Stove, Range or Heater work, unsurpassed.

Address, for terms or other particulars, CARBON STOVE CO., Burlington, N. J.

FOR SALE.—The Factory occupied by the undersigned as a saw manufactory. It consists of a two story Brick Building, 30 by 69 feet, brick boiler and engine room 16 by 35 feet, 15 horse engine and boiler, with every convenience and in excellent order, with a frontage of 12 feet on Canal St., one two story and basement frame Dwelling House, in good order. There is a very good supply of excellent water, and it is very conveniently situated, only five minutes walk from the ferry landing at Stapleton. The whole will be sold reasonably and on easy terms. Apply to or address,

J. & A. F. Siddall, Stapleton, Staten Island, N. Y.

## For Sale!

Hardware Business In a growing manufacturing town, one of the best locations in Vermont. Business well established and profitable. Stock about \$10,000, ingood order. This affords an excellent opportunity for a party with small capital to secure a paying business.

Address, W. R. BIXBY & SON, Vergennes, Vt.

#### To Rent.

First and third floors—together or separate. Brick building 125x50, well lighted and the best business location in the city. Light power will be supplied if desired, or parties can furnish their own if preferred. Address, with particulars.

H. D. STANLEY, Secretary,

Bridgeport, Conn.

#### IMPORTANT To Bridge Builders & Contractors for Iron Work.

FOR SALE, About 20,000 pounds of Patent Rolled Hexagon Nuts, reamed and chamfered for Bolts from 1½ to 1% in. diameter, at a very low price.

JOHN McANERNY & CO.,

Dealers II Railway & Steamship Supplies, 63 BROADWAY, N. Y.



#### FOR SALE,

£1. German consular in-structions in English, pub-tished by subscriber, Translator for MANUFACTURERS English. German.

French

Spanish. Electrotyped Catalogues in Spanish will serve for th the Chilean Exhibition, Sept. 16, 1875, and our

C. KIRCHHOFF Metal Reporter of Box 2806, N. W.

## Trade Report.

Office of The Iron Age. WEDNESDAY EVENING, Merch 3, 1875.

The past week has witnessed a decided improvement in the tone of the financial markets, resulting from the near approach of the adjournment of Congress and the brighter outlook for general trade. The money market is still very easy, but a turn is imminent, and higher rates must soon be demanded. Call loans have ranged 2 @ 3 per cent., and prime mercantile paper has advanced to 41/2 @ 61/4 per

The gold market has been without specula tive excitement. The following shows the

range of the premium :	Lower
Thursday114%	114
Friday 114 %	114
Saturday 114%	114
Monday	114
Tuesday	114
Wednesday115	114
Comment bonds have been	etwoner or

steady, and Railroad bonds strong, with a decided pressure on the part of investors for Union Pacifics and N. Y. Centrals.

The stock market has gained strength during the week, with the principal dealings in Union Pacific, Pacific Mail, Western Union, Lake Shore, Northwestern, Wabash, Eric, St. Paul, and Ohio and Mississippi.

The following tables show the foreign trade

movements for t	IMPORT		
Total for week Prev. reported	\$1878. $$9,394,736$ $63,675,992$	1874. \$9,972,300 52,070,609	1875. \$9,658,790 46,351,268
Since Jan. 1	e imports	of general	\$56,010,053 merchan-

Quant.	Value.
Anvise	\$1,640
Hrass goods18	1,648
Bronzes5	977
Chains and anchors103	3,831
Cutlery127	34,440
Guns	6,810
Hardware	12,417
Iron, pig, tone300	6,413
Iron cotton ties720	2,363
Iron tubes60	115
Iron, other, tons	1,683
Metal goods	12,759
Needles10	6,810
Old metal	778
Platina1	3,670
Per caps8	415
Steel930	10,503
Silverware 1	244
Tin, boxes	80,008
Tin (3,279 slabs)	63,960
Wire	8,769
Zinc157,403	9,274
EXPORTS, EXCLUSIVE OF SPECIE.	

EXPORTS, EXCLUSIV	E OF SPECIE	D.,
1873. For the week \$5,252,908 Prev. reported 39,047,067	1874. \$3,934,686 48,477,563	1875. \$3,469,070 36,892,266
Since Jan. 1\$44,299,975	\$47,412,349	\$39,361,336
EXPORTS OF S	PECIE.	
Total for the week		\$801,870 12,165,171
Total since January 1, 1875 Same time in 1874 Same time in 1873		\$12,967,041 5,223,167 10,381,654
Government bonds at th	ne close we	re quoted

11017	44017
U. S. 6s 1881, reg 11834	119%
U. S. 6s. 1881, cou11934	120
U. S. 1862, 5-20 reg 116%	117
U. S. 5-20 1862, cou	117
U. S. 5-20 1864, reg	11736
U. S. 5-20 1864, cou	117%
U. S. 5-20 1865, reg	119
U. S. 5-20 1865, coa	120
U. S. 5-20 1865, reg. new	118%
U. S. 5-20 1865, cou	11836
U. S. 5-20 1867, reg119	119%
U. S. 5-90 1867, cou	119%
U. S. 5-20 1868, reg	119%
U. S. 5-20 1868, cou	119%
U. S. 10-40 reg11334	
U. S. 10-40 cou 114	11436
U. S. 5s. 1881, reg114%	
U. S. 5s, 1881, cou	114%
The following were the highest and	
prices of stocks to-day:	
	Lowest.
N. Y. Cen. & Hudson Consolidated 10134	10136
Lake Shore 7834	73%
Rock Island104	103%
Del Teck and Western 1111	11114

U. S. Currency 6's.....

U. S. 10-40 cou 114	11436
U. S. 5s. 1881, reg	11436
U. S. 5s, 1881, cou	11436
The following were the highest and	lowest
prices of stocks to-day:	
Highest.	Lowest.
N. Y. Cen. & Hudson Consolidated 101%	10136
Lake Shore 78%	73%
Rock Island104	1084
Del., Lack, and Western	11134
Michigan Central 76%	75%
Wabash 1234	11%
Harlem129	128%
Western Union Telegraph 75%	7456
Atlantic and Pacific Telegraph 23	23
American District Telegraph 28	28
Northwestern 49%	4136
11 Pref 5436	53%
Milwankee & St. Paul. 3434 "Pref. 53%	843%
" Pref 53%	5836
Pacific Mail 39%	38
Erie 2736	26%
Ohio & Mississippi 26%	25%
Union Pacific 43%	4234
C., C. & Ind. Central 6	6
Atl. & Pacific Pref	18%
Hannibal and St. Joseph 21%	20%
Adams Express	102
CENEDAT HADDWADD	

#### GENERAL HARDWARE.

Although the inclement weather has done much to retard business, we hear very good ac counts of the amount of business in most quarters. This is especially true of those houses that depend largely on their travelers The city is not enlivened by the presence of many buyers, as the large trade, who were here in force last month, have nearly all gone home while the smaller trade has not made its ap pearance here to any extent.

Nails may be quoted regularly \$3.35 @ \$3.40. Trade is light, and Nails are still scarce on account of the difficulty of getting goods from the factories.

At a meeting last week of the manufacturers of the Domestic, Keystone, Turntable, Light-ning, Hudson, and Reading Apple Parers, the price for the season of 1875 was fixed at \$7.75 per dozen. Purchasers of more than 25 dozen during the season will be entitled to a drawback at the end of the season, provided they have not undersold manufacturers' prices.

The cost of all foreign goods has been advanced by the new tariff bill from 5 to 8 per cent., and the selling prices of most goods have been advanced in proportion, though there is as yet some uncertainty, as the trade only heard of the passage of this act this morning, and have had hardly time to adjust values in accordance with the new duties. Many goods

Pay a specific duty amounting to from 40 to 80

"23, "38, Side 74, Incase 74, Screw

will be seen that there are a good many reduc- tions in price, while there is only one unimpor	
ant advance :	
Page. Dis. per cent	- 1
2. Nickel Plated Steel Squares	0 [
** * 1.1 # *** 1 # 1 # 1 # 1 ***	0
All 1 ft Saugeon 90 des	-
Add for Nickel Plating— All 1 ft, Squares 8 doz., extra, \$2:50 All 1 / in. wide Sq'rs. " 3:00 2 in., Nos. 3, 4, 5 and 6. " 3:59	-
All 11/2 in. wide Sq'rs. " 3:00 2 in., Nos. 3, 4, 5 and 6. " 3:00 2 in., Nos. 1, 2, 2%, 15	t
and 100 4 00	1
2 in., Nos. 1, 2, 2%, 15 and 100. 3 55) ne and 100. 4 4 90 steel Rules. 4 4 90 Parties who become entitled to the full discount on Steel Sages and 100 the full discount of the full discount o	
discount on Steel Squares will be allowed 5	
discount on Steel Squares will be allowed 5 per cent. discount on our prices for Nickel	-
2. Steel and Iron Rules	
8, Carpenters' Steel Squares	1 6
3, " Iron "	ő
4. Socket Firmer Chisels, No. 1, or Extra	0
4, " No. 2, " 60&5&1	0
3, Iron Steel and Iron Eq'rs, by case. 55&14. Socket Firmer Chisels, No. 1, or Extra 60&4. 4, Corner No. 2, 60&5&14. Corner No. 1, 60&15 5, Framing No. 2, 60&16 5, No. 2, 60&16 5, Carpenters' Slicks, No. 1 or Extra	ŏ
5, Carpenters Slicks, No. 1, or Extra. 60&1 6, Draw'g Knives, No. 1, or Extra. 60&1 6, Knives, No. 1, or Extra. 60 6, Coach Makers' No. 1, or Extra. 6 7, Wag'n M k'rs' No. 1, or Extra. 6 7, Farmers No. 1, 6 7, Farmers 50&1	0
5, Carpenters' Slicks, No. 1, or Extra 60&10	0
6. Draw'g Knives, No. 1. or Extra 6	0
6, Coach Makers' " No. 1, or Extra 60	
7, Wag'n M'k'rs' '' No. 1, ''66	0
7. Shingle	
8, Handles, all kinds	íI:
9, Screw Drivers	5
9, Common Scratch Awis	1.
10, Ice Axe and Picks	
7, Farmers 50&1; 7, Shingle 6 8, Handles, all kinds 6 8, Handles, all kinds 5 9, Screw Drivers 5 9, Socket Scratch Awls 5 9, Common Scratch Awls 5 10, Ice Axe and Picks (10, Heavy Ice Picks, See Appendix, fol. 37 333, 10, Cold Chisels 323	
10, Cold Chisels	1
10, Cheese and Butter Tryers. See Appendix.   10io 37.   50&c.     11, Cast Shoe Hammers   56     12, Cast Nail Hammers   58     13, Cast Nail Hammers   58     14, Hammers, all kinds   50     12, Shingling Hatches   40     13, Cotton Hooks   51     13, Plumbers Ladies   55     14, Box Chisels   56     14, Cabinet Makers' and Onlit Frame Clarge   56     15, Cabinet Makers'   56     15, Cabinet Makers'   57     15, Cabinet Maker	1
11. Cast Nail Hammers	1.
12, Hammers, all kinds50	П
12, Shingling Hatches40	li
13. Plumbers' Ladles	
14, Box Chisels	
14, Box Chisels	l j
15. Blacksmiths' Drills.	1.
16, Wood Handle Garden Forks, No. 155&5	H
14, Cathlet Makers and Quilt Frame Clamps. 66 15, Bench Screws, Change List, 1½ in., \$20·50.60&10 15, Blacksmiths' Drills	li
16. Patent Floral Sets	
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17, Japanned Flumb Bobs, No. 160	Hi
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18, Japanned Barrel, Tower and Shutter Bolts.   60   9, Japanned Square Spring and Necked Bolts.   60   10, 10, 10, 10, 10, 10, 10, 10, 10, 10,	11111111111111111111111111111111111111
18, Japanned Barrel, Tower and Shutter Bolts.   60   9, Japanned Square Spring and Necked Bolts.   60   10, 10, 10, 10, 10, 10, 10, 10, 10, 10,	11111111111111111111111111111111111111
18, Japanned Barrel, Tower and Shutter Bolts.   60   9, Japanned Square Spring and Necked Bolts.   60   10, 10, 10, 10, 10, 10, 10, 10, 10, 10,	11111111111111111111111111111111111111
18, Japanned Barrel, Tower and Shutter Bolts.   60   9, Japanned Square Spring and Necked Bolts.   60   10, 10, 10, 10, 10, 10, 10, 10, 10, 10,	11111111111111111111111111111111111111
18, Japanned Barrel, Tower and Shutter Bolts.   60   9, Japanned Square Spring and Necked Bolts.   60   10, 10, 10, 10, 10, 10, 10, 10, 10, 10,	11111111111111111111111111111111111111
18, Japanned Barrel, Tower and Shutter Bolts.   60   9, Japanned Square Spring and Necked Bolts.   60   10, 10, 10, 10, 10, 10, 10, 10, 10, 10,	11111111111111111111111111111111111111
18, Japanned Barrel, Tower and Shutter Bolts.   60   9, Japanned Square Spring and Necked Bolts.   60   10, 10, 10, 10, 10, 10, 10, 10, 10, 10,	11111111111111111111111111111111111111
18, Japanned Barrel, Tower and Shutter Bolts.   60   9, Japanned Square Spring and Necked Bolts.   60   10, 10, 10, 10, 10, 10, 10, 10, 10, 10,	11111111111111111111111111111111111111
18, Japanned Barrel, Tower and Shutter Bolts.   60   9, Japanned Square Spring and Necked Bolts.   60   10, 10, 10, 10, 10, 10, 10, 10, 10, 10,	11111111111111111111111111111111111111
18. Japanned Barrel, Tower and Shutter Bolts.   60     19. Japanned Square Spring and Necked Bolts.   60     19. Japanned Lever Bolts.   60     10.   10.   10.   10.   10.   10.     10.   11.   10.   10.   10.     11.   12.   12.   10.   10.     12.   13.   14.   15.   15.     14.   15.   15.   15.   15.     15.   15.   15.   15.   15.     16.   16.   16.   16.   16.     17.   16.   16.   16.   16.     18.   18.   18.   18.   18.     19.   19.   19.   19.     19.   19.   19.   19.     19.   19.   19.     19.   19.   19.   19.     19.   19	11111111111111111111111111111111111111
22, Plated   4, Chain Door Fasteners, all kinds   60, 62, 104, 4, Chain Door Fasteners, all kinds   60, 62, 104, 4, Chain Door Fasteners, all kinds   60, 62, 104,	11111111111111111111111111111111111111
18, Japanned Barrel, Tower and Shutter Bolts.   60   9, Japanned Square Spring and Necked Bolts.   60   60,	11111111111111111111111111111111111111
18, Japanned Barrel, Tower and Shutter Bolts.   60   9, Japanned Square Spring and Necked Bolts.   60   60,	11111111111111111111111111111111111111
18, Japanned Barrel, Tower and Shutter Bolts.   60   9, Japanned Square Spring and Necked Bolts.   60   60,	11111111111111111111111111111111111111
18, Japanned Barrel, Tower and Shutter Bolts.   60   9, Japanned Square Spring and Necked Bolts.   60   60,	11111111111111111111111111111111111111
18, Japanned Barrel, Tower and Shutter Bolts.   60   9, Japanned Square Spring and Necked Bolts.   60   60,	11111111111111111111111111111111111111

		HE IRON AGI
	per cent., and on this class of goods also there is an advance of 10 per cent. in the duty. Im-	\$2 '20
l.	ported Screws are now sold at discount 50 and 121/2 per cent., on account of the advance in the	We We will be a second of the
1	tariff and in gold. The duty on Screws is per pound weight, and varies from 40 to 110 per	78. Sash Cord Irons and Sash Lifts
im-	cent., according to the size.  The price of Spofford's Braces has been ad-	81, Window Springs, Window Spring Bolts and Sash Props. 60 82, Shutter Lifts and Stubs and Plates. 60&10
kets, e ad-	vanced to discount 50 per cent., instead of discount 50 and 10 per cent.	84, Boston Shutter Hooks
out-	We are requested by Clark & Co., Buffalo, to give notice to the trade that the words "Clark's	
and	patent" are now east on the face of their No. 1 Blind Hinges and Gate Hinges.	85 to 87, all Nos. except F
rime	Hart, Bliven & Mead Manufacturing Com- pany issue, under date of the 1st instant, a	89, Drawer Pulls, Nos. 70 and 80
per	bew discount sheet for the goods of their own manufacture. They preface it with the follow-	90, " 20 to 2002 60&10 91, " 3 to 603½ 60&10 91, " 4 and 104
cula- the	ing remarks :	
west. 114%	With a desire to meet the reasonable views of dealers who distribute our productions, and with disposition and ability to meet competi-	94. French Window Shutter Handles
114½ 114½ 114¾	tion, we have the pleasure to present discount sheets of our spring prices for articles named in our Catalogue of 1873, Appendix No. 1, 1874,	94, Brass Lifting Handles
114% 114% and	and Appendix No. 2, 1875.  We would ask for a careful examination and	57, Tigue I mano Latenes
a de-	comparison of our goods, to verify our former declarations of improvement and perfection in	99, Pittsburgh Thumb Latches, No. 100
	quality, style, &c. We employ first-class artists to design new patterns, and ingenious mechanics to invent	No. 120, Round Handle, per doz., \$1*10
nion	of design and improvement we seemed at con-	101, Oblique Store Door Handles, Nos. 10 and 20   60&10   101, Oblique Store Door Handles, No. 30   65&10   101, No. 130   60   101, No. 130   60   101, No. 230, Change List, \$76.00 per doz   60   60   60   60   60   60   60   6
Lake Paul,	siderable expense by Letters Patent; yet we regret there are people in competition with us who, disregarding our legal and moral rights,	101, 101, 101, 101, 101, 101, 101, 101,
rade	are using our inventions without our consent.	102, Figured Enameled Store Door Handles No.
375.	obligation to consider our rights while we are	No. 40, per dozen, \$53.00. No. 50 per dozen
58,790 51,263	United States.	165, Figured Enameled Surface Chest Handles 60&10
0,053 han-	The following are their new discounts. It will be seen that there are a good many reduc-	107, "Flush"
alue.	tions in price, while there is only one unimportant advance:	1 109, Thread Escutcheons. Change List, Com-
1,640 1,648 977	Page. Dis. per cent. 2, Nickel Plated Steel Squares. 50  Add for Nickel Plating 50&10	mon
3,831 4,440 6,810	Add for Nickel Plating— All 1 ft. Squares # doz., extra, \$2:50	109, Bed Keys
2,411 6,413 2,363	All I ft. Squares	10., 80 10. Nos. 6, 7, 8, per 1b., 0 16
115 1,683 2,759	Parties who become entitled to the full	10, 80 10. Nos. 0, 7, 8, per 1b., 0 16. Nos. 0, 7, 8, per 1b., 0 16
6,810	discount on Steel Squares will be allowed 5 per cent. discount on our prices for Nickel Plating.	111, Plano Casters
8,670 415 0,503	2, Steel and Iron Rules	113, Globe Wheel Bed Casters
244 0,008 3,960	50 Steel and Iron Eq rs. by case. 50&10 4. Socket Firmer Chisels, No. 1, or Extra	114. Round Shal'ow Socket Casters     40       115, Deep     25       110, Truck Casters     35       117 to 119, Steelyards, all kinds     35       119, Grindstone Fixtures, Nos. 1, 2 and 3     55       120,     Nos. 4 to 8     60&5       120,     Nos. 9 to 11     60
8,769 9,274	4, "Corner "No. 1, "60&10 5, "Framing No. 2, "60&10 5, "No. 2."60&10	119, Grindstone Fixtures, Nos. 1, 2 and 3
75. 9,070	5, Carpenters' Slicks, No. 1, or Extra	120,
1,336	6, " Drawy Knives, No. 1, or Extra. 60&10 6, " Drawy Knives, No. 1, or Extra. 60 6, " No. 2 60&10 7, Wag'n M'k'rs' " No. 1, or Extra. 60 7, Farmers " No. 1, or Extra. 60 7, Farmers " 50&10 7, Shingle. 50&10	123, Shelf Brackets, No. 15
	7, Shingle	23)
1,870 5,171	7, Shingle	pendix, pages 28 to 32, for Reduced List50
7,041 3,167 1,654	10, Ice Axe and Picks	127, Mortise Bell Cranks. Change List, No. 5, per gross, \$45'00
oted	11 Clast Chan 77	\$6'00. No. 11, per gross, \$5'50 50&10 128, Check Springs, Bell Splkes and Cork Pressers
ked.	11, Cast Nail Hammers   50     12, Cast Nail Hammers   55     13, Hammers   11 kinds   56     12, Shingling Hatches   40     13, Cotton Hooks   51     13, Plumbers Ladles   55     14, Box Chisels   55	129, Iron Fire Dogs
19% 20 17		130,
17% 17% 17%	15, Blacksmiths' Drills	131, Iron Fire Dogs, Nos. 10 and 11     50       131, Figured Enameled Fire Dogs, No. 12     60       132 to 135, Brass and Irons and Fenders     50       136, 137, Shovel and Tongs Stands     (See Appendix, folios 34 and 35)     60       138, Blower Stands     60 50       139 to 144, Shovels and Tongs     50       145, Iron and Brass Head Pokers     60       147, Coal Fongs     50       147, Toy Sad Irons and Stands     50       148, Sad Iron Stands     55
19 20 18%		139 to 144, Shovels and Tongs
18½ 19¼ 19½	17, Japanned Plumb Bobs, No. 1	147, Coal Tongs. 50&5 147, Toy Sad Irons and Stands. 50 148 Sad Iron Stands. 50
19½ 19¾ 14	18, Japanned Barrel, Tower and Shutter Bolts60	144, Sad Iron Stands
14% 14% 14%	19, Japanned Square Spring and Necked Bolts. 60 19, Japanned Lever Bolts 60 20, 60 Chain Nos. 1 and 2 60&10 20, 70 Chain Nos. 1 and 2 60&10 21, Figured Enameled Barrel Bolts 60&10 21, 80 Square Bolts 70&10 22 Bolton & Sqvare Bolts 70&10	
rest	21, Figured Enameled Barrel Bolts	150, Nut Cracks
est. 01% 78%		153 to 171, Carriage Bands, Sockets, etc. (See Appendix for Reduced Lists and Discounts).
08% 11%	23,     Chain Bolts     .70&10       24, New Pattern Door Bolts     .60     .60       24, Japanned Staples     .55       24, Cast Brass, Straight Cupboard Bolts     .60&10       25, 26, Brass Barrel Bolts     .60     .60       26, Figured Knameled Capboard Bolts     .60&10       27, Flat Capboard Bolts     .60&10       27, Mortise Front Door Bolts     .60       28, 29, Brass Bolts, all kinds     .60	APPENDIX No. 1. Page. Dis. per cent.
11% 98%	27, Flat Cupboard Bolts. 60&10 27, Mortise Front Door Bolts 60 28, 29, Brass Bolts, all kinds 60	Page
28	30, Brass Flush Bolts	3, Cupboard Bolts 60&10 4, 5, Cupboard Catches 60&10 6, 7, French Window Catches 70
41% 53% 84%	84 Chain Door Fasteners all kinds conto	8, Imitation French Window and Cupboard Catches
88 26%	34, Figured Enameled Cupboard Latches 60&10 35, 36, Japanned Rural Catches 60 36, Figured Enameled (See Appendix, folio 4) 60&10	10, Cupboard Turns
12% 6	37, New Pattern Closet Catches 60 87, Figured Engaged French Window Catches 70	12, Sash Lifts     60       12, Sash Lock and Lift     55       13, Shutter Bare, Nos. 25 and 025     55
18½ 20¾ 92	38, French Window Catches, Nos. 397 to 314 60&10 Nos. 392 to 306 60&10 39, Figured Enameled Flush Cupboard Catches 60	11, Drawer Fulls
	40 44 75 731 4 60	
ac-	42, Flush Ring Show Case Catches 60&5	22, Bronze Metal Oblique Door Pulls 60 23, Shelf Brackets 60
ose	12, 43, Door Buttons, all kinds except Nos. 4 and 5.60 43, Nos. 4 and 5. 8334	24 to 27, Hat and Coat Hooks
of 4	44, Brass Drive and Screw Hooks	Latch, per doz., \$32.00
ere e	60&10 1 to 58, Hat and Coat Hooks. Change List60&10 Per gross\$3:30 4:00 3:70 4:50 Nos	No. 310½, 3½ in. Brass Bell, Bronze Metal Latch, per dos., \$32*00
ap-	Nos 11 19 111 112 59, Harness Hooks	36, Hunters' Hatchets, No. 1 50 36, Frame Pulleys, No. 90 60 36, Carpet Hammers, No. 5
40. ac-	60, Lamp and Casin Door Hooks. 60 61, Fancy Bird Cage Hooks. 60 61, Cottage Bird Cage Hooks, No. 1 70,85 61, No. 2 70 62, Figured Enameled Bird Cage Hooks, No. 10, 60 62, Paper Clips.	37, Beef Pounders, No. 1
om	62, Figured Enameled Bird Cage Hooks, No. 10. 60 62, Paper Clips. 55	Carriage Dands, & intened Drass, Sliver Plated
ers ht-	63, Paper Files	List
the -75	193, Fajer Crips. 55 62, Pen Racks. 50 63, Paper Files. 55 64, Spiral Spring Gate Latches. 60&10 64, Right and Lett Gate Hinges. No. 1 60&10 65, New England Gate Hinges, No. 2 65&10 65, New York State Gate Hinges, No. 3 60&10 66, Plate Hinges, No. 3 60&10 60, Plate Hinges, No. 3 60&10	Carriage Bands, Gold Plated Silver Plated
zen	65, New York State Gate Hinges, No. 3, 60&10 66, Plate Hinges 60&10 66, Barn Door Rollers 65&10 67, New Pattern Barn Door Hangers 60&10 67, Extra Heavy 66&10 67, New England 66&10 68, Barn Door Rail, Nos. 0, 1 and 2, 65&5 68, Barn Door Rail, Nos. 3, 4 and 5, 65&73 68, Barn Door Stays 60&10 68, Sidding Door Rail. 60	Lief     25&5       45, Carriage Bands, Iron Rim     30&5       45, Carriage Bands, Iron Bell     26&5       46 to 52, Shaft, Whiffletree, Neck Yoke and Fole     Sockets
ney	67, New England	66 to 82, Shaft, Whiffletree, Neck Yoke and Pole Sockets. 50&5 46 to 52, Pinished Brass Shaft, Whiffletree, Neck Yoke and Pole Sockets, Silver Plated List
ad-	68, Sliding Door Rail	Yoke and Pole Sockets, Silver Plated List 53, Carriage Knobs
per ave	69, Sliding Door Sheaves	53, Carriage Knobs 50, 10&5 54 to 57, All articles on these pages 50&10 58, Tackle or Awning Pulleys 60
ere nly	71, Frame Pulleys, No. 0	Page. Die non cont
in	72, " Nos. 25, 30, 35, 40, 45	2. Bottom, Foot or Spring Bolts, Nos. 25 and 60&10
80	68, Barn Door Stays 608.10 68, Sliding Door Rall 60 69, Sliding Door Sheaves 55&5 69, Barn Door Pulls 60 70, Foot Scrapers 60 71, Frame Pulleys, No. 0 60&10 72, Axle "Nos. 1 & 9 60 72, Axle "Nos. 5, 10, 15, 20 65&10 73, ""Nos. 25, 30, 33, 40, 45 60&10 73, ""Nos. 50, 50, 60 60&10 74, Incased Screw Pulleys 60 74, Incased Screw Pulleys 60 74, Screw "add 2½ in., per doz 60 75, Side "add 2½ in., per doz 60 76, Screw "add 2½ in., per doz 60 77, Screw "add 2½ in., per doz 60 78, Screw "add 2½ in., per doz 60	36
		1

4, Door Handles, No. 9
5, No. 8
6, " No. 18
7 " No 980
8. Shelf Brackets, No. 20
8. Shelf Brackets, No. 20. 50&10 9. No. 30. 65
NO. 30
10. Drawer Handles, No. 200
10 and 11, Hat and Coat Hooks 60.8:10
12, Bird Care Hooks
13, " No 4
13. Fire Pail Hooks, No. 1. 60&10
14. Chandeller Hooks
15, Barn Door Pulls, No. 3 60
15, Barn Door Pulls, No. 3
16, Drawer Pulls
17. French Window Catches, No. 115%
14. Cupocard Catches, No. 427. 60&10
No. 13
18, Watch Safes Turns
18, Match Safes
19, 20 and 21, Door Bells
21. Root Jacks
21, Boot Jacks. 60 22, Sash Fasteners, Nos. 135, 140, 145. 60&10
22, No. 155 65.8-5
23, " No. 105 50
23, Cupboard Latches 60&10
24. Willdow Spring Rolls ea
40, Gate Latenes.
25, N. E. Gate Hinges. 65&10 25, N. Y. State Gate Hinges. 60&10 25 Sash Bollows
25, N. Y. State Gate Hinges
25, Sash Rollers
20 and 27, Carriage Bands, Electro Silver Plated
and Oroide
97 Whistory Tipe
28 and 29, Club Handles
31 Nail Puller
31, Nail Pulleruet
The Grilley Mfg. Co. have issued the new
list of Patent Capped Screws given below.
With the new discounts the net prices are
thereby reduced considerable All is

thereby reduced considerably, especially in the tion is about 25 per cent. They now make both Flat and Round Head the same price, while there has heretofore been a difference of about 10 per cent. The following is their new list on Round and Flat Head Silver and Brass

ROUND AND	FLAT HEAD	SILVER CAPP	ED SCREWS.
¾ inch.	% inch.	% inch.	% inch.
No. 4\$0.84 50.93 61.07 71.20 81.35 91.50 101.60	No. 4. \$0.88 5. 0.98 6. 1.13 7. 1.25 8. 1.40 9. 1.55 10. 1.63 11. 1.80 12. 1.90	5 1.04 6 1.16 7 1.30	7. 1 34 8. 1 47 9. 1 61 10. 1 69 11. 1 85 12. 2 00 13. 2 35 14. 2 50 15. 2 75
1 Inch.	1¼ Inch.	1½ Inch.	1% Inch.
No. 6. \$1.27 7. 1.40 8. 1.53 9. 1.68 10. 1.73 11. 1.94 12. 2.10 13. 2.45 14. 2.70 15. 2.95 16. 3.35	No. 6. \$1.50 7. 1.55 8. 1.65 9. 1.80 10. 1.95 11. 2.10 12. 2.25 13. 2.60 14. 2.80 15. 3.24 16. 3.68 17. 4.00 18. 4.40	No. 7. \$1/88 8. 1/94 9. 2/05 10. 2/15 11. 2/38 12. 2/50 13. 2/85 14. 3/15 15. 3/50 16. 3/90 17. 4/40 18. 4/80 20. 5/85	No. 7. \$2'15 8. 2'20 9. 2'30 10. 2'40 11. 2'55 12. 2'80 13. 3'12 14. 3'45 15. 3'80 16. 4'10 17. 4'60 18. 5'10 20. 6'05
2 Inch.	2¼ Inch.	2½ Inch.	2% Inch.
No. 9. \$2.40 10. 2.50 11. 2.70 12. 3.00 13. 3.45 14. 2.75	No.10. \$2.85 11. 3.00 12. 3.25 13. 3.75 14. 4.00 15. 4.30	No.10\$3'45 113'55 123'65 134'00 144'25 154'75	No.14\$4.60 16 5.40 18 6.55 20 8.15
15 4.05	16. 4.80	16 5 10	3 Inch.

13 3·45 14 3·75			*0 010
15 4·05 16 4·40	16., 4.80	16 5 10	3 Inch.
17 5.00 18 5.40 20 6.50	18 5.70 20 6.75	18 6.10	No.14\$5.00 16 6.10 18 7.55 20 9.15
BOUND AN	D FLAT HEAD	BRASS CAPPE	D SCREWS.
1/2 Inch.	% Inch.	¾ Inch.	3% Inch.
No. 4. \$0.75 5. 82 6. 93 7. 104 8. 115 9. 127 10. 134	No. 4\$0'80 5 '88 6 1'00 7 1'11 8 1'23 9 1'34 10 1'40 11 1'47 12 1'57	No. 4. \$0.84 5. 93 6. 1.05 7. 1.15 8. 1.27 9. 1.36 10. 1.44 11. 1.52 12. 1.60 13. 1.89 14. 1.93	No. 6. \$108 7 1:17 8. 1:30 9. 1:40 10. 1:47 11. 1:56 12. 1:68 13. 1:87 14. 2:00 15. 2:25 16. 2:60
1 Inch.	1¼ Inch.	1½ Inch.	1% Inch.
No. 6. \$1'15 7. 1'25 8. 1'37 9. 1'47 10. 1'52 11. 1'62 12. 1'75 13. 2'00 14. 2'25 15. 2'43 16. 2'85	No. 6. \$1.37 7. 1.44 8. 1.50 9. 1.60 10. 1.68 11. 1.80 12. 1.95 13. 2.20 14. 2.40 15. 2.75 16. 3.08 17. 3.40 18. 3.70	No. 7. \$1'71 8. 1'77 9. 1 85 10. 1'95 11. 2'10 12. 2'25 13. 2'42 14. 2'70 15. 3'00 16. 3'35 17. 3'70 18. 4'05 20. 4'85	No. 7. \$1'96 8. 2'00 9. 2'07 10. 2'15 11. 2'25 12. 2'45 13. 2'68 14. 3'00 15. 3'30 16. 3'70 17. 3'95 18. 4'35 20. 5'00

2 Inch.	2½ Inc	h.	2½ In	ch.	23 Inch.		
No. 9 \$2.20 10 2.25 11 2.40 12 2.70 13 2.95 14 3.25	12	2.70 3.00 3.30 3.60	11 12 13 14	3·25 3·35 3·55	16. 4.95 18. 5.90 20. 7.10		
15 3·55 16 3·90 17 4·30 18 4·70 20 5·40	16 17 18	4.25 4.65 5.00	16 17 18	4.60	3 Inch. No. 14. \$4.60		
The follow the Grilley ( Round and Screws Round and Screws Water Hook I	Company Flat Hea Flat Hea	y too ad, 1 id, 1	k effectiver C	t on appearance	d .25 g off list . i		

Elm City Pad Ser English Style Pad Screws, Capped on Iron. From 50 % Brass and Silver Capped Picture Nails, 50 % Porcelain Picture Knobs ... 30 % W. C. Duyckinck, of 50 and 52 John street

(successor to H. A. Rogers & Co.) has issued a price list of railway and machinist supplies, in

price list of rallway and machinist supplies, in which they publish a card as follows:

To the Public: In offering this condensed price list, my object has been to present to the trade all the latest prices, and, for the convenience of old customers, have followed the general order of the Illustrated Catalogue (compiled by me) issued by the old firm in 1872. Hoping to merit the continuance of your favors, not only by promptly filling all orders, but also at such prices as may at all times prove satisfactory, I am, etc.

Lane Brothers, manufacturers of the Swife. Lane Brothers, manufacturers of the Swift Coffee Mills, and for whom S. Haviland & Son, 259 Pearl street, are agents, have issued a new illustrated catalogue of their goods. They claim to manufacture a greater variety of Coffee and Spice Mills than any other manufacturer of mills in the United States, and call attention to some new styles just introduced, which they say are the best in the market.

We invite the attention of those interested to the advertisement, among our special notices, of a gentleman who is going to attend the Chilian Exposition, and would like to take charge of the goods of some manufacturers who have not made other arrangements for their representation.

As will be seen by one of our special notices, the Trenton Vise and Tool Co. are now prepared to make all kinds of Iron and Steel Drop Forgings to order.

The advertisement of J. Clark Wilson & Co. is taken up this week with the goods made by the Snell Mfg. Co., for which they are sole agents. We suppose the excellent quality of these goods is so well known that any commendation would be superfluous.

The attention of our readers is invited to the list on our 18th page of the manufacturers represented by Graham & Haines. In the few years of their existence this firm have built up a very large business, and their cardinal principle has been that they must be able to sell all the goods of any manufacturer they represent as low as they can be bought at the factory. They are now issuing their illustrated Round Head Silver Capped, of which there are Catalogue, a volume of 258 pages, which conthe most sold, and upon which the net reducresented by them. Under date of the 1st instant, they issue the following special notice:

stant, they issue the following special notice:
No extra charge made for Nickel Plated Hoppers with Eagle Dome Tops, on American Coffee, Drug, and Spice Mills, Nos. 4, 6, 8, 10, 13, 14, 17, 18, 19, and 20.
The above Mills were formerly furnished with plain brass Hoppers only.
This great improvement has been made in the American Mills since our Catalogue went to press. No consideration need therefore be given to the extra charge mentioned on the various pages for Nickel Plated Hoppers and Eagle Dome Tops.
For illustration of Nickel Plated Hoppers with Eagle Dome Tops, see catalogue, page 258.

Our readers can hardly fail to notice the ad-

vertisement of the C. W. Maguire Brush Company. This concern has only been in existence about six years, but has in that time grown to be one of the two or three largest manufactur-ers in the country. They have always been noted for the perfect finish of their goods, and they express their determination to maintain the quality and appearance of their Brushes, while prices will be as low as good goods can be made, and low enough to meet any fair competition. They will continue, as in the past, to give special attention to the wants of the Hardware Trade. The following is the new net price list by which these Brushes are now sold :

#### NET PRICES PER DOZEN Wood Back Horse Brushes.

50	No. 40
10	14 At
55	** 41
15	" 42, Union
10	44. Dexier
	2.11%, Deater 8 11me 2.50
-	
	1, American Farmer 4:00
none.	1.75
0	1 ** 3, S.E.O.
0	48, Granger
55	49. Our Farm
5	" 50, Rosewood Back
	" 505, Arab 8'00
-	" Bil. All Bristles
	" 70, All White Bristles
	11 80, 11
-	
8	Sea Root Horse Brushes.
7	No. 77, Sea Root\$8:00
0	11 88. 11
0	
7	Dandy Brushes.
6	No. 2, Sea Root \$ 3.50 No. 10, Sea Root \$9.50
8	. 4 4.50 . 12 . 12.00
7	6 6 4 6:00 4 14 4 4 15:00
o i	8 8.00
5	Water Brushe:
0	
	No. 22, All Bristles. \$12.00 No. 24, All Bristles. \$16.00
	87 37 22

4,	11	4.50	12,	ca Moi		
6.		6.00 **	14.		12	
		8:00	Y.A.		15	00
634		0.00				
		ter Brus				
o. 22, All	Bristles. \$1	2.00   No	. 24, A	11 Bris	tles \$16	00
23.	. 1	1.00			CACO. GAO	UU
	Horse	Mane Br	mahea			
a 0 Wan						
0. 2, Sea	Root	los.	*****		***************************************	75
o, All	White Brist	169			12	.00
4, Class	Deinelon e	wal ahan		*****	14	75
B.	Bristles, c	bout to	H		8	.00
	WI	mout to	Acces.	*****	6	.75
Fles	vible Leathe	r Back	Liorse	Brus	hes.	
	Plain !	Stitched	Backe			
o. 5. Pat	tent Leathe				40	1777
. 7,	6.6				6	00
11,	6.0			*****	0	00
100,	5.6	******		*****		
115.	1.4.					50
12,	5.6					
110.	4.4	All Blac	ek Bris	of love	1.3	50
116, Bla	ck Leather	Black I	Bristle	S.	12.	00
117.	1.6				22	
6 656O	**					
12, Bis	mark Leath	er			8.	00
10.	3.6				10	
114.	4.8	All F	ristle	8	10	00
210,	8.6	All W	hite I	Bristle	s12·	25
212.	3.6	All G	rav.	- A A D C A D	13	543
25, Ru	sset Leathe	r. All V	Vhite.		12	00
450.	8.6	All G	rav		18	00
20,	**	All V	WEITERS		0.64	00
30,	4.6	,			32	CO
40,	**		48			00
585,	8.6	All G	rav.		21-	00
XX,	**	Yello	WOE	atka	Brist-	0.0
16					42.	00
XXX, Ru	isset Lent	her. Gr	av Br	intline.	VOPY	
XXXX, I	tiff Insset Lea:	her, Yell	ow O'	Katka	Bris-	00
XXXXX	Russet L	eather.	Velley	v O	Factor 56 1	903
(1)	ristics, very	neavy.			674	00
Funcy E	mbossed Le	ather $B_0$	tck He	orse B	rushes	
eked in	Paper Box	ces. On	.Half	Doze	m Each	
	is di	he Spor	t, **	DUZ	a Each.	

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			11	Red	WORLTH.	4 44	
水果	18,	1.5	4.6	44	6.6	99	
66	310,	4.6	3.5	Green	**	124	
		All Brise Embossed	0.8			140	j
	MUNA	ented	in six or	merent	cotors,	Pat-	
6.6	301,	Embossed	in six di	fferent	colors.	Pat-	
		ented				134	n
		1	loss of the	Ring.			
			sed on Rus				
No	200		ON ASIA	THE MALE	actics.	400	
8.6	300			*****			×
80		All White	Reintion		******	12.0	
36	400	, All White	OCIECICE.		*****	120	)
	600			******		10 5	þ
	LI	e Choice."-	-Embosse	d on R	usset L	eather.	
No	. 600	All White	Bristles			\$33.5	
86	650	All Black	8.6			40.0	d
6.6	000	All Black	4.6		*******	48.0	ì
	1.1	IN PRICE	- 15-111-120-120-120-120-120-120-120-120-120	TISE INO.	SHUE LE	BIRDER	
No	510	All White	Bristles.			\$17.5	d
8.5	5000	8.6	5.5			90.0	ż
6.6	525.	All Gray	" Pe	netrati	ng	18:0	ě
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22	'u
Embossed on Black Harness Leather.	O. K. Quality.—All White Long Russian Bristle, for
No. 118, All Black Bristles, \$32.00 120, 27.00 130, 40.00	Stucco Works,   No. 20
Stove Brushes. No. 1, Beaver Tail, \$2.00	O. K. Quality.—Metal Bound.—All White Long Russia Bristles, for Stucco Works.
" 2. Handled, 2.50 " 3. 3 (0 " 4, " 3.75	No. 25
5, 4:50 6, 6:00 7, 7:50	Paint Brushes.  Quality C.—These Brushes are made for common use, su)table for all ordinary kinds of work.
Scrub Brushes—All Bristles. No. 10. Gray Bristles. \$3.50	N
" 11, "	" 3
" 14. " 5.00	" 1
Maguire Patent Shoe Brushes.  No. 10, \$2.10   No.45, 500   15, 2.66   50, 550	X Quality.—These are a good, reliable Brush, and will give entire satisfaction.
" 20, 3.00 " 55, 6.00 6.75	No. 6. \$1 65 No. 2-0. \$5 40 1 5. 2 00 13-0. 6 60 4 2 40 14-0. 8 15
**39, 3°75 65, 8°00 4°31, 4°00 °70, 10°00 1°35, 4°00 °75, 12°00 40, 4°50 °80, 16°00	3 3 60 4 6-0 10.80
"40, 450   "80, 16'00 Nos, 10 and 15 put up in half-dozen paper pack- ages. All other numbers put up in half-dozen pasteboard boxes, and packed 12 dozen in a case.	" 1
Blacking Top, or Dauber.	Super. Quality.—A Reliable Brush—Warranted all Bristles.
No. 1\$1.00 No. 3\$3.00 1.50 Shoe Brushes .	No. 6. \$2.00 No. 0 \$7.20 1. 5. 2.25 20 9.00 1. 4. 2.50 30 10.80 1. 3. 3.60 40 12.40
Without Handles.	" 3
No. 110.         \$1.75         No. 140.         \$3.00           " 120.         2.00         " 150.         4.00           " 130.         2.50         " 160.         5.00	Extra O. K. or Gloss Paint Brushes.—All White Bristles—A Superior Brush. Adapted to do the
Porter's Hotel Shoe Brushes. No. 158. Extra Hotel Polishing	finest incide work. No. 6 \$2.40   No. 2-0
" Daubing 12:0 " Dirt 12:0 Window Brushes.	5 3:10 ° 3-0 13:20 4 3:90 ° 4-0 16:00 3 4:80 ° 5-0 18:60 • 2 5:70 ° 6-9 21:00 1 6:90 ° 7-0 25:20
No. 1, Flat, all Bristles	" 0
Dusting, or Counter Brushes. X Quality Dusting Brushes—All Bristles.	Superfine Paints.—All Bristles—Extra Heavy—Gray Center.
No. 1, Red Block\$3.75   No. 3, Red Block\$5.60   2, 4.37   4.4   4.5.70   XX Quality Dusting Brushes—All White Bristles.	N··. 5-0\$25·00   No. 7-0\$32·00 ··· 6-0\$28·75   ··· 8-036·50 Oval Varnish Brushes.
No. 11, Black Enameled Block \$4.50 " 12, "	Gloss Varuish Brushes. All White Bristles—A favor- ite with the Trade.
" 14 " " " " " " " " " " " " " " " " " "	No. 6. \$1.80 No. 2-0. \$6.30 5. 2.00 "3-0. 7.20 4. 2.55 "4-0. 8.40
No. 21, Black Enameled Block	" 3
Dusting BrushesAll Bristles.	1
No. 5, Maguire's Extra \$4.50 6, 600 40.75 40.87 5, 900	Super. Varnish Brushes—All White Bristles—A Good, Reliable Brush.
Dusting Brushes.—Fancy.—Ornamental Bicks.	No. 6. \$2.00 No. 2-0. \$7.20 " 5. 2.40 " 3-0 9.60 " 4. 3:00 " 4-0 12:00
No. 15, All White Bristles \$5.00 17, " 9.25 19, " 10.50	" 3
Oil Cloth Broom Brushes.	Extra O. K. Varnish Brushes,—All White Bristles—
" 12 9 00 " 18 18 06" " 13 10 75 20 1975 " 14 13:50 " 21 21:50 " 16 14:50 " 22 24:00	A Superior Brush—Largely used as an Oval Paint Brush.  No. 6
" 24, Round end, for sweeping walls 28'00	" 5
25, Extra heavy, for hotel use.       36:00         26, Stirl, for carpets.       14:00         27, 18 inch block, for banks.       44:00	" 3. 450 " 5-0 16:50 " 2. 5:40 " 6-0 19:75 " 1. 6:30 " 7-0 22:50 " 0. 720 " 8-0 27:00
Pope's Eyes. No. 1	Flat Varnish Brushes.
Pope's Heads. No. 1	Cedar Handles—Ordinary .  No. 1 inch
Whitewash Heads.  Quality C.—This quality is made for ordinary work, numbered by inches.	Elastic Quality-Fine Ground A superior Brush
No. 6	for Painters' use.  No. 1 inch\$2.40   No. 3 inch\$7.20  " 1½ " 3.60   " 3½ " 9.60
7 3 60 95 6.75 175 4.00 105 7.75 8 4.50	No. 1 Inch. \$2.70 No. 3 Inch. \$2.70 " 1½" 360 " 3½" 960 " 3½" 960 " 2½" 480 " 4 " 12.00 " 2½" 630
Quality X.—This quality is Cased with White Bristles, and is a desirable Brush for the Jobbing Trade.	Painters' Dusters.  No. 1
No. 2, 6 inch\$3:50   No. 10, 8½ inch\$7:25   4, 7   4.50   12, 9   8.25   6, 7½   5:25   14, 9½   9.50   9.50   8, 8   625   16, 10   11:00	" 2
6, 7% 9'20 8, 8 6'25   16, 10 11'00 Quality, A. B.—This quality is all Bristles, and is	American Sash Tools. No. 1
Quality, A. B.—This quality is all Bristles, and is very popular with the Jobbing and Retail trade. Numbered by inches.	" 2 0.80 " 6 1.50 " 3 0.95 " 7 1.75 " 4 1.10 " 8 2.00
No. 6½ inch	French Sash Tools.—Wire Bound.
XX Whitewash Heads.	No. 1     \$0.00     \$1.45       " 2     0.90     " 6     1.75       " 3     1.10     " 7     2.00       " 4     1.25     " 8     2.25
Quality XX.—We make expressly for family use.  Are a good, reliable Brush, and warranted all Bristles.	French Quality—Extra Fine Ground. These Brushes are made from selected Bristles. The best we make, and warranted to give entire satisfaction.
No. 22, 6½ inch\$4:00   No. 30, 8½ inch\$11:00   24, 7   5:25   32, 9   14:00   25, 7½   6:50   34, 9½   18:00   30, 8½ inch\$11:00   32, 9   18:00   32, 9½   18:00   32, 9½   18:00   32, 9½   .	No. 1 \$1.20 No. 6 \$3.00 " 2 1.50 " 7 3.60 " 3 1.80 " 8 4.20 " 4 2.10 " 9 4.80 " 5 2.40 " 10 6.00
Whitewash Heads.	" 4.
Quality O. K.—Is made from all White Bristles. Is made full, and is suitable for fine work.  No. 10. 7% [neh	Marking Brushes. Ordinary Quality.
No. 10, 7% inch	Assorted, from 1 to 6net price, per gross, \$7:20  Extra Fine Pointed Artist Bristle Marking Brushes, Round and Flat.
Quality, Super.—Corresponds with our Extra O. K. in size and length. Made of Gray Stock, and is a very attractive and desirable Brush.—Numbered	No. 1
by inches.	** 3
No. 7 \$12:00 No. 8\( \) \$23:00 \\ 7\( \) \$15:00 \\ 8 \\ 9 \\ 27:00 \\ 8 \\ 19:00 \\ 9\( \) \$32:00 \\ Extra O. K. Whitewash Heads.	Assorted, from 1 to 6, \$11 per gross.  Stencil Brushes.
Quality, Exira O. K.—A superior Brush, made of pure White O' Katka Bristles, expressly for Masons' use.	Extra Fine Ground Cedar Handles,
8018' use.  No. 0\$27'00   No. 000\$52'00   100	" 2 1 75
Whitewash Brushes.	1 1.75 8 8 850 1 3 2.00 9 4.00 1 4 2.25 10 4.75 1 5 2.50 11 6.00 1 6 2.75 12 7.50
Quality X. This quality corresponds with the same brand of WW Heads.  No. 2.6 inch\$400   No. 10, 8% inch\$7.75	Shaving Brushes. No. 1
No. 2, 6 inch	" 2     '60     " 6     1.25       " 3     '70     " 7.*     1.40       " 4     85     " 8     1.65
All Bristles. This quality corresponds with the	Ribbon Shaving Brushes, White Handles.
Same brand of WW Heads.   No. 7	" 30
Super Whitewash Brushes	No. 123\$1 15 No. 126
This quality is made especially for family use.  No. 4-0	Wire Bound—Extra.—Black Handles. No. 45
Kalcomine Brushes.  X Quality. White outside and gray middle. Corresponds with X quality paints.	55
responds with X quality paints. 6 inch	No. 75
Super Quality.  All Gray Bristles. Corresponds with super quality	George B. Walbridge & Co. will hereafter keep in stock a full line of Axe, Pick, Sledge,
of paints. 6 inch	Hammer, and Hatchet Handles, made by James Woolworth, Sandusky, O. Geo. B. Walbridge &
Extra O. K. Quality. All White Russia Bristles.	Co. have issued, under date of the 25th ult., the following price list:
6 inch	Pratt & Co.  Horse Nails, Buffalo Forged and Union Forged.
Paste or Wall Brushes.  X Quality.—all Bristles—White outside—Gray center.	No
No. 1, 3 inch\$4.50   No. 4, 4½ inch\$14.00   2, 3½ '' 775   5, 5 ''18.00   3, 4 '' 10.75   3, 4 '' 10.75   3, 5 '' 118.00	Crowbars, Steel Pointed
Super Quality.—All White Bristles.	Tuyere Irons, "Monitor," e.ch, \$2:50dis. 20 x Coach Screws dis. 45&15
No. 1-0, 3 inch \$6.00 No. 4-9, 4½ inch \$16.50 " 2-0, 8½ " 9 00 " 3-0, 4 " 12.00 " 5-0, 5 " \$1.00	Coach Screws dis. 45&15 dis. 45&15 Wasners less cents per pound, 9 Nuts. Square, Cold Cut. "Hexagon," "

.1	THE IRON AGI	1
n Bristle, for	Shelton Co.	
\$25.00	Bolts, Carriage and Tire	
White Long	** Machine	
	Bed Screws 5% Lots 25 Gross 10% Cut Tacks, Brads	1
for common		8
of work.	No	
	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	(
8.40	Horse and Mule Shoes.	1
\$2.50.	Burden's. Rhode Island. Shoenberger's. Mule.	(
e Brush, and	Snipments from Factories at special prices.	-
1. \$5:40 6:60	Wringers. Providence, Family Size, per dozen\$64.00	
	Providence, Family Size, per dozen 99 00 Novelty, Large Family Size, 72 00 Univer-al. Hotel Size, 99 00 Monitor, Family Size, 99 00 In lots of 2 dozen, deduct \$2 50 per dozen.	1
9 60 10 80 12 60 11 40	Monitor. Family Size, In lots of 2 dozen, deduct \$2 50 per dozen.	1
\$3.00. Varranted all	Syracuse Bolt Works. Philadelphia Tire and Carriage Bolts, Norway	1
\$7.20	Iron, dis.50&15%  Derby Silver Co.	10
10.80		1
12*60 14*40 17*50	Plated Spoons, Forks, &c.         .dis. 50&5 %           German Silver Spoons.         .dis. 30&10 %           Solid Steel Knives, Full Plated.         .net prices           Corkscrews.         .dis. 10 %	i
All White	Sidney Shenard & Co.	1
*10.80	Catalogue at d Price List on application. Stove Boards, Brooks' Patent	,
16:00	Goodell Co.	i
18.60 21.00 25.20 30.00	Apple Parers, Lightning	1
Heavy-Gray	Cherry Stoners, Family	1
\$32.00	Elephant Edge Tools.	ľ
36 50	$ \begin{array}{llllllllllllllllllllllllllllllllllll$	1
tles-A favor-		46
\$6.30 7.20 8.40	H. T. Miller.         Hatchets, Boys' Axes	40
7:20 8:40 9:60 11:40	Bench and Broad Axes	1
	Pocket KnivesFull line.	
\$6.00. Bristles—A	Woolworth's Handles. Extra. 1 2 N 3 B C	
\$7·20 9·60	Extra. 1 2 N 3 B C Plck, 36 inch, \$3.00 1.75 Axe, 36 " 2.70 1.90 1.40 1.25 80 " 34 " 2.70 1.90 1.40 " 32 " 2.25 1.75 1.40	1
9.60 12.00 14.40	32 " 2.25 1.75 1.40 30 " 2.25 1.75 1.40	1
16'40	** 32	1
ite Bristles-	" 24 " 1:50 1:25 1:00 Mining Pick Handles in Every Varlety.	
n Oval Paint	Hatchet and Hammer Handles of all kinds.	1
\$9.00 10.80 14.00	Porter Saw Co. Circular Sawsdis. 25 %	1
UG 01 10 '0U	Mill Saws	1
19:75 22:50 27:00	Mace's Patent Solid Spur Auger Bits dis 15 4	1
	Diamond Cast Steel	1
\$4·80 6·30	of 6 or more	]
perior Brush	Diamond Cast Steel Augers 40&10 y Drills. Blacksmiths' Self Feeding, Length 33 inches, Weight 45 pounds; each, \$7:50; in lots of 6 or more 10 y Union Bolts. 40 x Boring Machines, Phillips' Angular Self-Withdrawing.—By means of the movable collar the depth of the hole is readily set before boring commences, and without stopping boring, or watching to see when the required depth is reached, the Auger returns itself and is ready for another hole. Complete 3 zugers. \$7:25, net Boring Machines, Snell Manufacturing Co.'s. Complete, with 3 Augers each, \$5:75, net Ten Eyck Grub Hoes dis. 30 x Washoe Picks dis. 15 x Halter Chains. dis. 30 x Brad Awls and Tool Sets. dis. 30 dis. 30 x Brad Awls and Tool Sets. 30 Tools. 12:50 No. 42, Apple Wood, 10 Awls. 20 doz., \$10:50 No. 44, Rosewood 11:50 No. 45 11:50 No. 45 11:50	
\$7·20 9·60 12·00	depth of the hole is readily set before boring commences, and without stopping boring, or	,
12.00	watching to see when the required depth is reached, the Auger returns itself and is ready	)
\$10:00	Boring Machines, Snell Manufacturing Co.'s. Complete, with 3 Augerseach, \$5'75, net	
19:00	Ten Eyck Grub Hoes dis. 30 % Washoe Picks dis. 15 %	
	Brad Awls and Tool Sets	
\$1·25	No. 43, 12:50 No. 44, Rosewood	1
\$1.25 	Shovels and Spades.	ľ
\$1.45 1.75	D, or Long Handles, Square Point, No 2. Shovels. Spades.	
2.25	C. E. Jenning's Plain Back, Cast Steel Edge, Black. \$15.00 \$16.59 C. E. Jenning's Plain Back, Cast steel Edge, Polished	
The best we	c. E. Jenning's Back Strap, Solid	
atisfaction. \$3.00	Cast Steel 16:00 16:00 16:00 Stone's Plain Back, Steel Edge, 11:25 12:25	1
3 60 4 20 4 80	Black 11:25 12:25 Stone's Plain Back, Steel Edge, Polished 12:25 13:25 Stone's Back Strap, Cast Steel, Polished	1
6.00	Case's Iron, Polished 8:00 8:00	1
er gross, \$7:20	Round Point Shovels advance per dozen 50c	1
king Brushes,	A full list of Shovels, Spades and Scoops sent on	1
**************************************	application.  Brighton Coffee Mills.	1
9.22 2.50 2.75	With regulating Thamb Screw. Per doz. No. 1, Iron Hopper, Box 6 x3½ inches \$4 00 No. 2, Britannia " 66x4 "	-
*10	With regulating Thamb Screw. Per doz.  No. 1, Iron Hopper, Box 6 x33 inches. 24 00  No. 2, Britannia "65x3" 756  No. 3, Iron "7 x44" 9900  No. 4, Britannia "7 x44" 11 00  No. 10, Franco-American, Box 73x44 inches,  Japanned Cover. 12 00  No. 11, Franco-American, Box 73x44 inches,  Ornamental Cover 13 00  Ornamental Cover 13 00	
dles	No. 10, Franco-American, Box 75, x44 inches, Japanned Cover. 12:00	
\$3:00	Ornamental Cover	1
	Wiles.	
6·00 7·50	P. Stub's List at \$8 '50 to the £	
\$1:00	Buffalo File Co. Balance of their stock at \$3.25	1
1.25	to the £.  Stove Lid Lifters.	1
Handles.	Always Cool, with Round, Venti-	4
\$1:30 1:60	Diamond Cool, with Ventilated Han-	1
1.90	In full barrels. Discount, 25 per cent.  Handled Axes.	4
	J. Russell's. Packed in cases of 1	1
ndles. \$2.50	dozen each	1
	American Oil Cabinets, designed expressly for	1
\$2 40 2 40	shops, railroade, steamships, light houses, &c. ls furnished with waste box, oil cup rack, gauge rod, nozzle rack and cleaner, and other conveniences, and, having lock, answers as both tank and closet.	1
ill hereafter	conveniences, and, having lock, answers as both tank and closet.	1
lick, Sledge, ide by James	20 4 20'00	1
Walbridge & ne 25th ult.,	50 " 85'00	1
and beg	100 " (9 apartments) 55'00 150 " (2 apartments) 60'00	1
ion Forged.	250 4 60:00	1
10 10 4 23	250 (2 apartments) 70.00	1
r pound, 5%c.	Chucks, Danbury Drill Chucks, each \$10'00 Dis. 10 %, Screws, English, all sizes	
534 c.	No. 24	1
dis. 20 % dis. 45&15 ts per pound, 9	Mincing Knives, Smith's Patent, Double Blade	-
44	pany Wethersfield Novelty Com-	1

#### BRITISH IRON MARKET.

(Specially reported by cable for The Iron Age.) WEDNESDAY, March 3, 1875.

Scotch Pig .- The upward movement of prices fell off a little, but have since recovered, and are now steady.

Manufactured Iron .- There is very little doing, the market ruling dull, and prices weaker. Quotations for best Staffordshire Bars are nominally unchanged.

Rails.-The market is dull, although the demand has somewhat improved, and prices are weak. We quote Welsh unchanged.

#### IRON.

American Pig.-Business is very dull, neither makers nor consumers showing much disposition to press transactions. The uncertainty as to coal supply still continues, though no difficulty is at present experienced in obtaining sufficient coal. There have been no sales of consequence to report, and those furnaces that advanced their price to \$30 per ton for No. 1 Foundry have receded to \$28, which is the usual price for good brands. We quote No. 1 Foundry, \$28; No. 2 Foundry, \$26; and Grav Forge, \$24 @ \$26.

Scotch Pig .- About 400 tous of Eglinton have been sold on private terms, and this brand is now held at \$34 @ \$35. The market has been strengthened by higher prices in Glasgow, advanced rates of freight, and the expected and the duty. We quote: Coltness \$38.

Rails.-There are no transactions reported,

\$30, but there have been no recent transactions to establish the value, and, beside, the available stock here is small.

Scrap.-We note the sale of 200 tons No. 1 Wrought at \$35, 100 tons at a price said to be a shade over \$35, and 100 tons at \$32. There has been more inquiry within the past few days, and we know of \$33 being offered and refused for 1000 tons, which is probably the largest quantity in the hands of one party in New

The following is BIGELOW & JOHNSTON'S monthly circular, dated the 28th ult. :

New RAILS .- The market continues dull and New Ralls.—The market continues dull and listless both for Iron and Steel, the only transaction worthy of note being the closing of a contract by the Cincinnati Southern Railroad with the Cieveland Rolling Mill Company for 12,500 tons Iron and 11,000 tons Steel, the former at \$52.75 per ton and the latter at \$76.77, delivery at Ludlow, Kentucky. Outside of this transaction there has been but little done.

Total to date.....

OLD RAILS.—Rather more inquiry and prices somewhat improved. 

Import at New York this month...tons, Previously since January 1.........." Same time, 1874.

Schap Iron.—The stock is all held by the ealers, who are not disposed to part with it except at full rates.

No. 1 Wreught ......currency, \$34.00 @ \$35.00 

Total to date ..

8.042 \* These prices represent, as nearly as possible, the range, according to location of mill.

Copper.-The tariff bill was passed by the precise interpretation of it by the Treasury Department, we shall refer back to it in detail as 9 by 36. regards Metals. Our Copper market has been quite dull, mainly owing to the continuance of London is unaltered at £54. It sells below cost the severe winter weather, which hampers the here. movement of Metals as much as everything else. In England they seem to be no better off in this respect, according to late cable reports and as the weather has been as boisterous all around the globe, it is fair to presume that the many sailing vessels which have taken Copper Ore on the West Coast will be a great deal delayed on their way to England. Should the spring demand be a brisk one there and on the Northern Continent, there may be a time, consequently, when the stock of Ore and of pure Copper will run lower than it has been for years. As regards our own spring opening,

21%c., on the spot. Baltimore may be quoted 211/c. @ 22c., in a small way, with little doing. Nothing has been done in Lake futures. There have been received cablegrams from England dated Feb. 27, when Chili Bars stood £83, and prices received a check during the week, and Best Selected, £90; later on Bars gave way 10/ probably owing to the bad weather impeding trade. As regards the general Copper position in Europe, it was a rather improving one, from the fact that an extra demand was developing for both Bombay and Calcutta, the wants reing of such a pressing nature that between 200 and 300 tons had been shipped thither, even direct from Australia. We beg to remark that the great Peninsula of India proper, with a population of two hundred million souls, is apt to take a good deal of Copper, if, as seems to he the case, the supply has run low. The manufactures of Copper are sustained as follows: New Sheathing Copper, 28c.; Bolts and Braziers, 40c.; Bronze and Yellow Metal Sheathing, 21c.; and Yellow Metal Bolts, 28c., net cash. Tin .- The following cable news has come

to hand: "London, Feb. 26-"Straits Tin, £90," March 2-"Straits Tin, £90; prices steady, with a strong speculative demand; L and F, £95; English Refined, £97." SINGAPORE, March 1: "Malacca Tin, \$23.50 per picul." March 3-"Malacca Tin from \$23.621/4 @ \$23.75; February shipments from here to Bos ton, 150 tons; to New York, 500; and to the United Kingdom, 250-together, 900 tons." The foregoing telegrams, in the first place, now accomplished advance of 70 cents, gold, in tended with a speculative demand; and, in the second place, that the Singapore February account of the inability of those who want ally heavy ones, probably induced by the Rails to pay cash. We quote American \$48 @ low cost of the metal. As for the sudden imold Rails.—We quote, nominally, \$27 @ provement of £2 in Straits in the London market, and the speculation which sprang up simultaneously, we beg to refer to the follow ing passage from a private London letter, dated Dec. 23, 1874, which we reproduced in our report of January 14, 1875: "There are our report of January 14, 1875: always many chances in favor of an article that is relatively so cheap as Tin would be at anything below £90." Although we have abundantly shown that the position of Tin is by no means a good one from a statistical point of view, the cheapness of money and the low price of the metal have been, it would seem, a sufficient inducement to cause the speculators to re-enter the markets for a rise, without minding the heavy supply in sight. But whether the advance can be sustained or improved upon to outlast the as yet dull times on the other side, is another question. These mercurial movements of Tin are viewed with such a degree of distrust at New York that, with the total absence of business in it, either and F, spot and futures, 20%c.; English Refined, spot and futures, 21c.; and Banca, 25c. The market closes dull, without anything transpiring either on the spot or "to arrive." Tin Plates have also become very quiet, and the dealings have been of a retail character merely. 9,686 We quote slightly lower: I. C. Charcoal, \$9.50, gold, per box; I. C. Coke, \$7.50 @ \$8; Coke Terne, \$6.75 @ \$7.25; and Charcoal Terne a little higher, \$8.50 @ \$9.

Lead .- Sales of the week have summed up 300 tons Domestic, at 58/4c., gold. It has re lapsed into dullness since, and is offering at 5%c., gold, while no higher bid than 5.70c. gold, can now be obtained. The gradual decline of the domestic article is due to the increased production that has been going on for a year past without an adequate consumption to prevent an accumulation of stock. The inference is that the domestic article will continue in the same downward direction till we either produce less or consume more. There is no saying, consequently, where it will stop; some people expect the price of 5c. @ 51/4c. gold, ere long. Foreign is inactive at nominally 6%c., gold. In Europe greater steadiness prevails. The manufactures of Lead are quiet at the following quotations : Bar, 8%c ; Pipe, 9c. and Sheet, 91/c., less 10 per cent. to the trade.

Spelter and Zinc .- Sales of Domestic to the extent of 100 tons have been effected at 2.510 61/c., currency. What we have said with refapplies to Spelter. For aught we know we may be producing a surplus of Spelter, too, and in such an event the selling of it at 6%c., currency, would be satisfactorily explained. Other Copper.—The tariff bill was passed by the Senate last night, and as soon as we know the Foreign remains quiet at 71/2c. @ 75/2c., gold. Sheet Zinc is also quiescent at 9c. @ 91/c. gold,

#### OLD METALS, PAPER STOCK, &c.

The Old Metal market is laboring under a season of dullness, and no heavy transactions have occurred since our last report. Prices are somewhat weaker, though nominally un-changed. White Rage, No. 1 and 2, are in good demand, and quotations are easily obtained. Book Stock is moving freely at firmer prices. Other articles are not materially changed. We quote the following as the current purchasing rates:

#### IMPORTATIONS.

Of Hardware, Iron, Steel and Metals into the Port of New York, for the week ending March 9, 1875 :

Hardware. Iron Iron.

Harrison W. G.
Cast, lots, 1

Hopkins E. T.
Scrap, bdls, 179

Lang W. Bailey & Co.
Plates, 52

Bars, 1447

Bundles, 50

Laughland & Co.
Hay bands, bdls., 191

Fierson & Co.
Rods, bdls., 162

Riker J. L. & D. S.
Bar, b.lls., 360

Wellington, Knight
Oo.
Boxes, 100 Allcock S. Laight & Co. Cases, 7
Brown Wm.
Anvile, 2
Boker Hermann & Co.
Mdse. pkgs., 50
Arms, cs., 95
Casks, 3
Bawo & Dotter, Cases, 7
Cases, 7
Barstow E. W. & Sons, Chairs, 16
Burham C.
Files, cs., 4
Dickinson Heary, Files, cs., 4
Dickinson Henry,
Cases, 1
Planque de Swarts,
Chains, bbls., 8
Dimon Charles,
Cases, 1
Frith Edward,
Avila, 50 Boxes, 100 Order. Kilos, 641,360

Cases, 39 Pig tons, 200 Frith Edward,
Anvils, 50
Chains, cks., 3
Casks, 1
Axles, cs., 1
Frasse P. A. & Co.
Wire, cks., 2
Field A. & Co. Steel.

Brown Wm.
Cases, 27
Colby J. C. & Co.
Wire, bdls., 169
Drexel, Morgan & C.
Bars, 1542
Barnshaw Affred,
Steel plates, bd Cases, 69 Mdse. pkgs., 28 Fuller Bros. Fuller Bros.
Casks, 3
Mdsc. pkgs., 8
Harmar Wm. & Co.
Packages, 4
Hopkins E. T.
Casks, 4
Harris S. E. Barnsnaw Affred, Steel plates, bdls Hogan John, Bundles, 23 Bars, 5 Cases, 12 Casks, 4 Cases, 18
Casks, 4
Hugill Chas,
Bundles, 8
Leng & Ogdens,
Tubes, cs., 3
Riker J. L. & D. S.
Bundles, 280
Vose, Dinsmore & Co.
Bars, pkgs., 51
Wood W. A.
Cases, 36
Coder,
Cases, 58
Order,
Casks, 40
Bars, 25
Cases, 2
Bundles, 1320

Metals.

Casks, 4
Harris S. E.
Cases, 6
Cases, 6
Cases, 1
King, Brigge & Co.
Chains, cks., 7
Casks, 1
Kaufmann & Jonas,
Mdse. cs., 10
Lau & Geritchs,
Cases, 2
Meno, E. S.
Bale ties, lots, 359
Long & Sons,
Cases, 1
Merchants' Dispatch Co.
Arms, cs., 1
Moore's J. P. Sons,
Cartridge cases, cs., 19
Mdse, pkgs., 10
McCulloch & Co.
Cases, 6
Mson John W. & Co.
Wire rope, colls, 11
Michelis & Kaskell,
Cases, 2
Owen A Bruce & Cook,
Antimony, cks., 6
Tin plates, bxs., 948
Byne Joseph & Co.
Tin plates, bxs., 1634
Tin sheets, bxs., 41
Cort N. L. & Son.
Tin plates, bxs., 375
McColl Duncan,
Scrap, cks., 1
Scrap, cks., 2
Dickerson J. S. & Co.
Antimony, cks., 17 Bruce & Cook. Cases, 2
Owen A.
Cutlery, cs., 1
Robbins C. & Son,
Casks, 10
Packages, 9
Roosevelt S. & Co.
Casks, &
Schuyler, Hartley & Graham,
Riffes, cs., 40
Bayonets cs. 8 Cases, 2

Scrap. Icad, Cks., 2
Dickerson J. S. & Co.
Antimony, cks., 17
Echeverria M. & Co.
Copper, pigs, 4
Ermen W. H.
Tin, bxs., 3798
Haxtum B.
Lead, bars, 2700
Hentze H. & Co.
Tin, labs, 3496
HartLucius & Co.
Tin, labs, 3496
HartLucius & Co.
Tin, ingots, 300
Msgnus P.
Metalware, cs., 4
Moore's J. P. Sons, 6
Nayior & Co.
Tin plates, bxs., 836
Pleibs, Dodge & Co. Riffes, cs., 49
Bayonets, cz., 8
Spies, Klesam & Co.
Mdse, pkgs., 4
Schoverling & Daly,
Arms, cs., 1
Per. caps, cs., 3
Sawyer John,
Wire rope, colls, 2
Tomes Francis & Co.
Per. caps, cs., 1
Taylor & Thomas,
Boxes, 5 Tin plates, bxs., 839
Phelps, Dodge & Co.,
Rolled zinc, cks., 404
Tin plates, bxs., 23,823 Van Wart & McCoy,

Anvils, 2
Mdsc. pkgs., 10
Chains, cks., 8
Casks, 6
Witte John G. & Bro.
Guns, cs., 5
Wiebusch & Hilger Hwd.
Co. 823 Tin. ingots, 279 Antimony, cks., Salemon A. H. & Co. Copper. bbls., 1 Brass, bbls., 1 Tomes Francis & Co. 150 Wiebusch & Hilger Hwd.
Co.
Mdse. pkgs., 33
Cases, 9
Files, cks., 2
Chains, cks., 29
Ward A.
Packages, 5
Winchester Repeating
Arms Co.
Arms, ca., 1
Wood W. A.
Grindstones, 64
Order. Tomes Francis & Co. Leadware, cs., 3 Wheeler E. S. & Co. Tin plate<sup>4</sup>, bxs., 637 Windmuller L. & Roelket Sheet zinc, cks., 150

Sheet zinc, cks., 150
Order.
Rolled zinc, cs., 100
Lead, pigs, 3006
Tu, siabs, 2993
Tin, lngots, 300
Tin plates, bxs., 5037
Tin, bxs., 3038
Without bills of lading.
Tin plates, bxs., 3056

COAL.

We have no new feature of interest to report in the condition of the Coal market this week. Some of the companies are short in their sup plies, and many of the trade are out of certain sizes. No prices for March have been agreed upon in consequence of the unsettled condition of affairs in the mining regions. The inquiry for Bituminous has improved. Contracts are being made by gas companies at \$6.50 @ \$6.75 for Pennsylvania and Westmoreland, \$6.75 @ \$7 for West Virginia.

The Philadelphia and Reading Railroad Company have issued a circular, on the first of vance; 1000 tons Old Rails, \$29.50; 300 tons March, giving the rates of freight and the tolls | Scrap, No. 1 wrought at \$33. March, giving the rates of freight and the tolls on Anthracite Coal from this day until further

6. Freight on Coal in the Company's boats and barges, from Newburg to New York, will be 65 cents per too, and to other points at schedule rates. Delivery by the company's boats must be agreed on at the beginning of the season, or applied for when a monthly quota is accepted.

The quota for each month is to be taken at equitable proportions during the month, at the convenience of the company. Parts of cargoes

River Carbonite, \$9; Kanawha House \$14.25; American Gas, \$7 to \$7.25; American Cannel, \$12 to \$14; Pennsylvania and Westmoreland, \$7.25; Murphy Run, \$7.40; Newburg Orrel, \$7.50; Sterling Ohio, \$12; Ince Hall, \$17 to \$18; Liverpool House Cannel, \$18; Liverpool

Gas, \$11; Newcastle Gas, \$7.50 to \$8; Scotch, \$9. The Coal transported over the Cumberland Branch Railroad during the week ending Feb. 27, 1875, amounted to 987 tone, as against 2541 tons shipped in the corresponding period of last year, showing a decrease of 1554 tons. Over the Cumberland and Pennsylvania Railread, for the same period, the shipments were 16,124 tons, against 18,954 tons shipped in 1874, a decrease of 2830 tons. The aggregate amount of Cumberland Coal shipped by the various companies so far this year amounts to 147.110 tons.

PHILADELPHIA. PHILADELPHIA, March 2, 1875.

The market continues to show an advancing endency for Pig Iron, owing to the troubles in the Coal region, and the fact that no prospect of a speedy settlement of them exists. In the Schuylkill region the miners, at a late meeting, adopted \$2.75 per ton as the basis for contract, and \$3 for day labor, which are an advance of about eight per cent, on last year's rates. The terms offered by the operators equal a reduction of forty per cent. on last year's rates, so that it will be seen the two interests are widely apart. Meanwhile, the stocks of furnace coal are reduced to a minimum, which cannot last more than a week or two, and house coals are not in supply beyond thirty days. As usual at such periods, riot and arson are rife in the mining regions, and the outlook for the production of Anthracite Irons is bad. Prices, under this state of affairs, would naturally advance but for the protracted winter and heavy obstructions to navigation, which prevent consumers of Pig Iron from filling orders when had. The reports from Pittsburgh indicate that unless the boilers shortly accept the situation, other labor will be substituted in the mills, under labor will be substituted in the mills, under protection, and this may strengthen the demand for Forge Pig. Bars are in fair demand at quotations, although no large specifications, usual at this season, have been yet booked. Rails are in decidedly stronger request, and generally on better terms of payment. Old Rails and Scrap continue about as at our last. The next thirty days will probably show a marked advance in all grades of iron, as with the opening of navigation will come a demand which cannot be supplied from present snall stocks, and with the existing difficulty in procuring fuel.

Prices are about as follows, and generally very firm at these figures, viz:

Pig Iron.—No. 1. Foundry, \$29.50 to \$30; No. 2, \$27 to \$28; Gray Forge, \$26 to \$27.

BARS.—2.Sc. per lb.

No. 2, \$27 to \$28; Gray Forge, \$26 to \$27.

BARS.—2-Sc. per lb.
OLD RAILS.—\$29 to \$30.
SCRAP.—\$32 to \$33.
The sales include some 2000 tons Nos. 1 and 2 Foundries at best quotations; also, of 1000 tons Gray Forge, p. t.; 500 tons Gray Forge at \$24, at furnace; 1000 tons Gray Forge, at furnace; 500 tons more, do., \$24, furnace; 1000 tons Light Rails, \$25-50, at New York; 500 tons same figures; 200 tons Rails, 52's, at \$52, here; 200 tons Scrap Steel at 2½6. per lb.; 1000 tons Muck Bar, 500 do. and 200 do., all for Pittsburgh, on private terms, said to be a sharp advance; 1000 tons Old Rails, \$29-50. 300 tons

#### PITTSBURGH.

equitable proportions during the month, and convenience of the company. Parts of cargoes left over in one month will not be delivered in a succeeding month, except at the company's option. Where orders have been accepted for delivery at points on the Hudson River, in the company's boats, if delivery is delayed for the company's convenience it will be made later in the season.

The Pennsylvania Coal Company is not in the combination formed by the other Coal companies, and while it does not work against the other companies, is entirely independent of the coalition.

We quote as follows: Anthracite, \$4.75 to \$6.30; Cumberland, \$6.25 to \$6.50; West Virginia, \$7; James River Steam, \$6.25; James River Carbonite. \$9: Kanawha House \$14.25;

standing the enhanced cost of the raw article as may be fairly quoted at \$40 to \$42, cash, an \$43 to \$44, 4 mos., according to quality.

STEEL.—There is a very fair trade in Steel All the mills are in operation. Some of their report that they have about all they can deand the indications are that trade will continut to improve as the spring season advances. Our manufacturers have had no difficulty with the skilled workmen, who submitted to a reduction of about 10 per cent., and consequently the have steady employment all winter.

of about 10 per cent., and consequently they have steady employment all winter.

Scrap Iron.—There is a continued good demand for No. 1 Scrap, and 2s the supply is pretty well reduced, the market is firmer, but prices are not quotably higher, \$32 to \$33, delivered free at mills.

Dealers quote buying sales as follows, cash:

sates as follows, cash:

Car axles

No. 1 scrap
Machinery metal

Car wheels

Light scrap

Stove Flate

No. 1 car springs

Bugay springs

Frog Bars.

and at the same time stiffen the product, as the consumption of the former must of necessity be reduced, and the production of the latter considerably curtailed. This action would indicate that the mills in question have discovered that they cannot manufacture Iron any cheaper than Plitsburgh.

The Lock-Our.—The indications just now are not as favorable, apparently, for an ending of the lock-out as they were two or three weeks since. A large mass meeting of puddlers and helpers, union and non-union, convened at City Hall this afternoon, which was very largely attended, and speeches were made vered at City Hall this afternoon, which was very largely attended, and speeches were made and resolutions adopted reaffirming the justice of the course they have taken, and expressing a determination to hold out until the manufacturers were willing to submit to their (the puddlers) demands. They don't appear to take much stock in the report that negro puddlers are to be brought here from the South to take their places. The manufacturers however their places. The manufacturers, however, appear to be as firmly resolved as ever not to start up their puddling furnaces until they can do so at \$4.50; they say they cannot and will not pay any more.

#### CINCINNATI.

Messrs. L. R. HULL & Co., under date of March 1, write us as follows: Pro Iron.—The market is firm at an advance of \$1 per ton, but is not active. The large buyers are, as a rule, well stocked and not disposed to bid higher figures. The principal holders of Iron are in a strong position financially, and able to command the advanced prices by waiting for the current demand. We quote: HOT BLAST CHARCOAL.

HOT BLAST CHARCOAL

Hanging Rock No. 1. 2 ton, \$28.00 @ 29.00—4 mos.

"No. 2. 26.00 @ 27.00—4 mos.
"Forgo. 25.00 @ 66.00—4 mos.
"Forgo. 25.00 @ 66.00—4 mos.
"Forgo. 25.00 @ 26.00—4 mos.
"Forgo. 25.00 @ 26.00—4 mos.
Alabama No. 1. 26.00 @ 27.00—4 mos.
Missouri No. 1. 27.00 @ 26.00—4 mos.
"No. 2. 36.00 @ —4 mos. Alabama No. 1... Missouri No. 1... No. 2... | No. 2 | No. | Missouri Georgia Alabama Machine

March, giving the rates of freight and the toling.

PITSBUEGH.

PI

present condition of affairs, to seil ahead at any price. Manufacturers generally are not worrying themselves as much over the lock-out as the public have been led to believe. They claim that there has been no margin for profit at the rates current all whiter; that by reducing the supply they will be enabled, after a time, to obtain better prices, and that the strike will naturally tend to bring about this result. We quote the condition of the

#### LOUISVILLE.

Messrs. GEO. H. HULL & Co., under date of March 1, writes us as follows: The market is firm with a brisk demand, and an advance has been established on most grades of Hot Blast. Cold Blast is steady, but without change in price. The usual time, 4 mos., is allowed on quotations below:

	H	OT BLAST	CHARC	OAL,		
No. 1 F'dr	e,	66	66	66	26.00 @	26.00
" 1 Forg	e,	Tennes Alabam Iron Me	a Ores.		26 00 @ 25 00 @ 25 00 @ 26 00 @ 28 00 @	26.00 26.00 28.00
No. 1 F dr	y, from ce,	66	ri Ores		28.00 @ 27.00 @ 27.00 @	28.00
Car Wheel	from l	LD BLAS Hanging Tenness Alabama Georgia Missour Kentue	Rock dee Ores Ores . Ores 1 Ores	Ores	38 00 @	40°00 40°00 40°00
		-	-			

Tonome, on a mos. dine.	
Mo. Stone Coal, No. 1 F'dry .:	
" No. 2 F'dry.	28.00 @ 30.10-4 mos.
" No. 1 Mill	26.00 @ 28.00-4 mos.
" Charcoal, No. 1 F'dry	80°0 66 33°00-4 mos.
" No. 2 F'dry	28.00 @ 80.00-4 mos.
No. 1 Mill	26.00 @ 29.00-4 mos.
" Nos. 4, 5 & 6	31.00 (a 35.00-4 mos.
Tenn. Charcoal No. 1 F'dry	30.00 @ 35.00-4 mos.
" No. 2 F'dry	28'(0 @ 30'00-4 mos.
American, Scotch, "Cherry	
Valley " No. 1 Foundry	39.00 @ 43.00-4 mos.
American, Scotch, "Cherry	
Valley " No. 2 Foundry	36.00 @ 38.00-4 mos.
Massillon, No. 1 Foundry	37'00 @ 39'00-4 mos.
" No. 2 Foundry	34'00 @ 35'00-4 mos.
Mo. Charcoal Blooms	75 00 @ 80 00-4 mos.

#### CLEVELAND.

Messrs. C. E. BINGHAM & Co., 25 West Main treet, under date of March 1, quote the Iron

market as follows, 4 mos. time:
LAKE SUPERIOR CHARCOAL.
No. 1     32 59—4 m.       No. 2     32 00—4 m.       No. 3     32 00—4 m.       No. 4     32 50—4 m.       Nos. 5 and 6     33 00—4 m.
BITUMINOUS FOUNDRY.
No. 1 Foundry.       \$28.00-4 m.         No. 2 Foundry.       26.50-4 m.         No. 1 Gray Forge.       25.00-4 m.
AMERICAN SCOTCH.
No. 1, Cherry Valley
MASSILLON.
Massillon No. 1     \$31.00-4 m.       B-1     29.00-4 m.       Massillon No. 2     27.00-4 m.

#### BALTIMORE.

Messrs. WYETH & BROTHER, Iron and Steel merchants, South Charles and Lomburd streets, report us the following prices under date of March 2: There is no quotable change to note in this market for the past week. Trade rules depressed and quiet, and we quote the list un-altered but weak.

#### AMERICAN REPINED BAR IRON.

altimore				g	1	(r	o	n	١.								. 93	32	00	0	36:00
arginia.	61			4								0		w		۰	. 1	90	100	00	35.00
labama nthracite												۰				۰	. 7	7	00	60	28:00
0.6	No.	2		 0						۰		۰	۰	0	0		. 1	16	.00	0	27.00
hite and																					26.00

Take Dowlars, for instance. This concern usually employs some 11,000 men. Of that total very few are now at work, and they must inevitably be discharged as soon as the now small stock of fuel has been consumed. Nine furnaces are only in half blast, and will have to be entirely blown out unless a settlement be speedily effected. The same company also has the contract for the supply of coal to the Inman steamers, but that must, of necessity, be broken through very shortly. The horses in the company's pits, about 1000 animals altogether, have been brought to the surface and stabled in temporary shedding, and in various directions are miles of empty coal wagons. The men at these works are, perphaps, somewhat better off than their confreres, inasmuch what better off than their conferes, inasmuch as they have a savings bank in connection with the establishment, with about £40,000 lodged by the depositors. At Cyrfarthfa, the iron-stone miners only are at work, on a reduction of 10 per cent.; all the blast furnaces are blown out, the pits are closed, and the horses are stabled on the surface. The Plymouth works are also sitent and deserted, every blast furnace being out, and even the officials are paid off. A similar state of affairs prevails at at Mountain Ash, Aberdeen and Abernant; whilst at Rhymney only one mill is kept at work, this single mill must also stop as soon as the stock of fuel is exhausted. Tredegar is carry-ing on a feeble business on the same conditions, of \$1 to \$2 per ton on Charcoal Irons. Mill Stocks at furnaces very light. We quote as follows, on 4 mos. time:

Mo. Stone Coal, No. 1 F'dry. \$20.00 @ 37.004 mos. No. 2 F'dry. \$20.00 @ 37.004 mos. No. 1 Mill. \$26.00 @ 28.004 mos. No. 1 Mill. \$26.00 @ 28.004 mos. No. 2 F'dry. \$20.00 @ 37.004 m as they have a savings bank in connection with entertained.

BELGIAN IRON TRADE RETURNS.

BELGIAN IRON TRADE RETURNS.

The correspondent of the Engineer furnishes the following statistics of the Belgian iron trade for 1874: He says that the official returns show that the exports of iron minerals from Belgium last year amounted to only 108,204 tons, or 108,837 tons less than in 1873, and 70,800 tons less than in 1872. The exports of pig iron from Belgium only amounted last year to 16,137 tons, or 11,000 tons less than in 1873, and 33,000 tons less than in 1872. The exports of rails from Belgium last year were 92,227 tons. This total shows an augmentation of 19,285 tons as compared with 1873, and 10,700 tons as compared with 1873, and 10,700 tons as

THE SCOTCH PIG IRON MARKET.

compared with 1872.

THE SCOTCH PIG IRON MARKET.

The Glasgow market has ruled quiet since I last reported upon its condition. Makers' special brands have been in less request, and have consequently fallen a shilling or two per ton. The stocks in Counal's stores has fallen off somewhat, standing now at 31,167 tons, a reduction of over 5000 tons since Christmas. Freights are unchanged. The Scotch malleable iron trade is dull, but the foundries are mostly well supplied with orders. Thomas Allan & Squ (Spring Bank), have an order for 9000 tons of gas pipes, including 32,000 lengths of equal flameter. Laidlaw, Son & Caine are executing a large contract for engines, pipes, &c., on account of the St. Petersburg water supply, beside a smaller specification for the Airdrie Company. D. Y. Stewart & Co. and Messrs. Thomas Edington & Sons are jointly executing an order for 10,000 tons of water pipes for Glasgow, a large contract for the Dundee Water Commissioners, and 16,000 tons of water pipes for Berlin. Writing on Febru ry 12th, Messrs. James Watson & Co., Glasgow, said: "The Scotch Pig Iron market remains steady, with little alteration in price of warrants. Business has been done from 72/9 to 73/4½, closing to-day at 73/. Makers' quotations for special brands have been generally reduced. Shipments last week were 7548 tons against 7308 tons in the corresponding week of 1874."

THE NORTH OF ENGLAND

THE NORTH OF ENGLAND

iron works remain quiet, and are only very par-tially employed. Prices are easy but nominally unaltered, so that there is no need to allude to them at any length. It may be stated, never-theless, that the strike in South Wales has caused a few orders for iron rails to flow into

scription of railroad accessories—neither buffers, springs, tires nor axies being in anything like well sustained request. The directors of the Midland Railway Company are, nevertheless, asking for tenders for the supply of 3000 pairs of carriage and wagon wheels and axies, such tenders to be sent in not later than February 16th, inst.

Speaking of wagons, furnishes me with a reminder that the whole of the local wagon companies are presenting very favorable reports to their sharcholders. In addition to those to their sharcholders. In addition to those to which I made allusion in my last week's communication, I notice that the Sheffleld Wagon Company, Limited, has purchased 231 wagons during the half-year, making the stock 4136 wagons. A profit of £9235 14, 11 has been made during that period, out of which—after working expenses have been paid—it is proposed to pay dividends of 15 per share on the first issue, 11 on the second issue, 8/ on the third issue, 11 on the second issue, 8/ on the third issue, 11 on the second issue, 8/ on the third issue, 11 on the second issue, 8/ on the third issue, 11 on the second issue, 8/ on the third issue, 11 on the second issue, 8/ on the third issue, 11 on the received the wagon of the British Wagon Company, Limited, Rotherham, and tive that the second issue, 8/ on the third issue, 11 on the second issue, 8/ on the third issue, 11 on the second issue, 8/ on the third issue, 11 on the second issue, 8/ on the third issue, 11 on the second issue, 8/ on the third issue, 11 on the second issue, 8/ on the third issue, 11 on the second issue, 8/ on the third issue, 11 on the second issue, 8/ on the third issue, 11 on the second issue, 8/ on the third issue, 11 on the second issue, 8/ on the third issue, 11 on the second issue, 8/ on the third issue, 11 on the second issue, 8/ on the third issue, 11 on the second issue, 8/ on the third issue, 11 on the second issue, 8/ on the third issue, 11 on the second issue, 8/ on the third issue, 11 on the second issue, 8/ on the third issue, 11

other timber-growing countries, are pretty good and steady customers for large sized circulars

The engineering works are not actively engaged, but at several establishments a fair amount of work is being done in the shape of replacement and repairs of old machinery and fittings.

replacement and repairs of our machinery and fittings.

Edge tools proper are in steadily good demand for New Zealand, the Cape, India, the West Indies and Australia, and are likely to sell freely for some months forward.

The shareholders of Joseph Rodgers & Sons (Limited) met at their offices last week and declared a dividend of 10 per cent. making, with the interim dividend of 5 per cent. for the year. They also added between £4000 and £5000 to the reserve fund. The chairman, Mr. Newbold, told the shareholders that they had much reason to be well satisfied with the year's trading, taking into consideration the disturbed

much reason to be well satisfied with the year's trading, taking into consideration the disturbed and sluggish state of trade all over the world, and had good prospects for the current year. I think I have before stated that there are only about 35 or 36 shareholders in this concern.

Some of the manufacturers and factors report a little better business in best cutlery, and a few of them are sending heavy lots of common goods off to the Eastern, African, Levantine, and West Indian markets. Australia and Canada are manifesting a clearly stronger desire to trade with us. At Liverpool, on Friday, 115,000 E. I. bufalo horns were offered for sale. There was fair competition, and about 94,000 sold—16% oz. to 23% oz., at 22/6 to 26/, and 37% oz. at 41/6, the latter being a good price. while light horns were generally 1/to 2/easier, south staffordshille and Birmingham.

while light horns were generally 1/ to 2/ easier, south staffordshire and birmingham.

There is very little alteration to record in the general quotations for Staffordshire finished iron, but it may be said that owing to the easier tendency of best coal, bars and other iron are not unlikely to come down a little. A fairly good medium bar is, in fact, now obtainable at £8, 17/6, and good plates at £12 to £12, 19/. A little more business is being done in strips and hoops for baling purposes on United States account, via Liverpool. There is, also, a fairly well sustained demand for sheets, which are quoted at £12 for good singles, and from that down to £10, 10/ for the same size for galvanizing uses. Several descriptions of hardwares are selling rather more freely than they have lately done, and appear likely to be in brisker request as the season advances. Iron washers are reduced about 12½ per cent., and nuts and bolts are also much easier. Engineers' bolts over 3 in. are 2/ to 3/ per gross lower, coach and wagon bolts 2/ to 4/ per cwt. down; coach screws (pointed), 2/ to 3/ per cwt., and small sizes 3d. per gross off; machine made nuts are 2/ to 4/ easier, hand made 2/ to 3/, with small sizes 3d. per gross. Other kinds of nuts, bolts, set screws, bolt ends, machine made rivets, gasfitters' stocks and dies, screw plates, taps, pipe wrenches, cutters, spanners (Clyburn's), and other similar goods are all reduced by 5 to 12½ per cent., net. SOUTH STAFFORDSHIRE AND BIRMINGHAM.

#### SOUTH WALES.

I cannot add much to what I have reported of the state of trade in this district under the heading which has reference, above, to the great strike there.

#### THE METAL MARKETS

have been quiet during the week, and values have remained similar to those last recorded. Messrs. Von Dadelzen & North report: "Copper.—The last small charters from Chili, and the coal question, have caused a better inquiry for bars; business has been done at £83, 10, and £83, 15 for G. O. B., and £84 for Lota in Swansea, and G. O. B. to arrive. Wallaroo held at £93; Burra, £91. In English a good many cheap second-hand parcels of tough and select having been cleared off, prices are decidedly firmer. Tin dull and rather lower. The large arrivals of Straits and Australian make buyers hesitate. A moderate business has been done in Straits at £92 down to £90, 10 for spot, and £90 for arrival. Australian £90.

make buyers hesitate. A moderate business has been done in Straits at £92 down to £90, 10, for spot, and £90 for arrival. Australian £90. English is rather unsettled. Tin plates, very little passing, prices steady. Lead continues flat at £23. Speller.—Owing to scarcity of fuel, some of the Swansea smelters are asking more money; no transaction reported in Silesian, nominally £23. 10. Quicksilver about £21. 10. but buyers few and shy. Autinomy £54." The Mining Journal remarks: "Copper.—The market has become distinctly firmer during the week, and holders have been unwilling to sell except in small quantities, and at full rates. Many, indeed, decline to sell at all, as they look for a considerable advance. The chief support which the market has received has been the continuance of the Indian demand for manufactured. So long as this goes steadily on, even should there be no increase to it, prices of all descriptions of copper will probably remain very first, and with a general demand will certainly advance. Sir Charles Forbes & Co.'s circular, dated Bombay, Jan. 18th last, states that 'both sheets and sheathing have been in improved request at an advance of 8 annas per cwt., stocks being light, and the up-country demand having strengthened. No transactions, however, have transpired from first hands. Yellow metal continues in good inquiry, and prices have advanced 8 annas per cwt. all round, and although only one sale has been reported from first hands. Xellow metal continues in good mquiry, and prices have advanced 8 annas per cwt. all round, and although only one sale has been reported from first hands. Xellow metal continues in good mquiry and prices have advanced 8 annas per cwt. all round, and although only one sale has been reported from first hands. Yellow metal continues in good mquiry, and prices have advanced 8 annas per cwt. all round, and although only one sale has been reported from first hands. Yellow metal continues in good mquiry and prices have advanced 8 annas per cwt. all round, and although only

	Tames and the Property of the			0000			
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		£	8.	ď.	£	Đ.	d
1	Merchant bar	8	15	00	9	0	-
r	Merchant bar, in Wales	8	5	00	8	10	-
1	Staffordshire	9	5	00		15	1
1	Ноор	10	15	00	11	15	1
		12	10		13	10	-
1	Nail rod	10	0	00			- (
1	Bar, best crown		5	00			1
i	Boiler plates	12	0	00		5	i
3	Tin Plates: f. o. b. sn 1	ive	rpoo	l, per	boa	n	
. 1		£	B.	d.	£	S.	d
1	Charcoal, I. C	1	14	00	1	17	-
1	Coke, I. C	1	8	00	1	10	-
	Copper: Delivered in 1			, per	ton		
	Bolt and Sheathing			£	98	A £	100
	Tile					2	91
3 1	Tough cake				91	6	99

[For Foreign Metal Reports see page 11.] JACKSON & CHACE,

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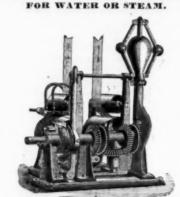


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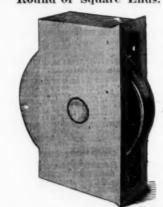
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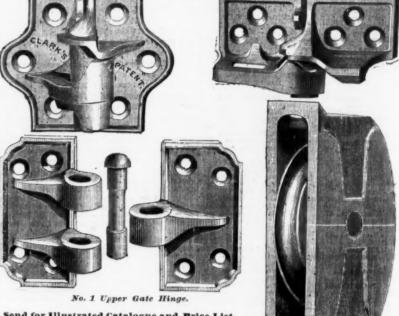
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They are superior to the obst. English, or other Anvils, on account of the peculiar process of their manufacture (invented and used only by this concern), and from the quality of the materials employed.

The best English Anvils, after a time, become hollowing on the face by continued hammering in use, on account of the florous nature of the wrought iron—causing it to "settle" under the face.

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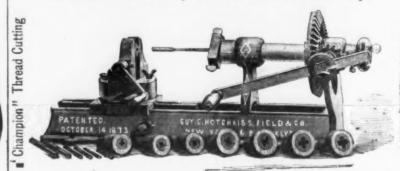
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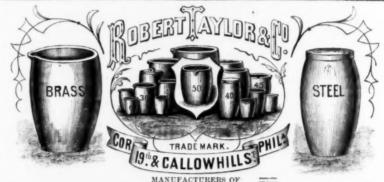
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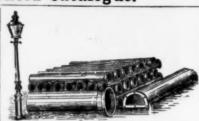
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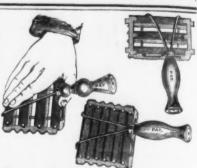
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Churchyard. Joseph. Buffalo. N. Y.
Scott Geo. M., Chicago. Hi.
Beltiur. Learner. Makers.
Beltiur. Learner.
Beltiur.
Beltiur. Learner.
Bird Cages. Makers of.
Helpz. Pierce & Munschauer.
Buffalo. N. Y.
Osborn Mig. Co., 99 Beccker, N. Y.
Bernholomew G. W. & H. S., Bristol, Ct.
Bolt Headin: Machines. Manufacturers of.
Chapin Machine Co., Pine Meagow. ConnPlumo. Burdict & Barnard. Buffalo, N. Y.
Bolt Machinery.
American Bolt Co., Lowell, Mass. Plumo. Burdict & Barnaru. Bulas.
Bolt Machinery.
American Bolt Co., Lowell, Mass. N. H.
Forsath S. C. & Co., Manchester, N. H.
Boring Machines. Maker of.
Phillips Mig. Co., Pittsburgh, Pa. Forsaith S. C. & Go., Manchester, N. H.

Horing Machines, Maker of,
Phillipe Mg., Co., Pittaburgh, Pa.,
Brasse Manufacturers of,
Ansonia Brass and Copper Co., 19 Cliff. N. Y.
2 Rrockivin Brasse & Copper Co., 100 John, N. Y.
2 Davol John & Sons., 100 John, N. Y.
2 Davol John & Sons., 100 John, N. Y.
3 Manhaitan Brass Co., 53 Reade, N. Y.
4 Manhaitan Brass Co., 53 Reade, N. Y.
5 Manhaitan Brass Co., 53 Reade, N. Y.
6 Piume & Atwood Mfz. Co., 60 Chambers, N. Y.
7 Scovill Mfg. Co., 421 Broome, N. Y.
7 Scovill Mfg. Co., 421 Broome, N. Y.
8 Brick Presseen, Maker of
Carnell Geo., 1819 Germantown Ave., Phila., 27
Carnell Fl. L. & D. R., 1814 Germantown Ave., Phila., 27
Horidge Builders.
Moseley Iron Bridge and Roof Co., 5 Dey, N. Y.
8 Brick Presseen, Maker of
Carnell Geo., 1819 Germantown Ave., Phila., 27
Hopkins & Dickinson Mfg. Co., 69 Duane, N. Y.
8 Hitcher and Shoe K. Rives., Manufacturers of,
Wilson John, Sheffield, England.
8 Butts and Hinges.
8 Hartinger.
9 Hartinger. Barton D. R., RocanBuck Bros., Milloury, Mass.,
Condec A. & Co., Ill Broadway, N. Y.,
Cond Vasses,
Sidney Shepard & Co., Buffalo, N. Y.,
Cond Hods, Manufacturers of,
Easterbrook Win., 31 Cherry, Phila.,
Easterbrook Win., 31 Cherry, Phila.,
Strain, Burns & Co., 46 Clift, N. Y.,
Strain, Burns & Co Easterbrook Wm., 311 Cherry, Ph Smita, Burns & Co., 46 Cliff, N. 7. Coffee and Spice Mills. Lane Brothern, Millbrook, N. Y.. Enterprise Mfg. Co., Philadelphi Commission Merchants, Engi Goddard Samuel A., & Co., Birmin Coffee and Spice Mills.

Lane Brothers, Millbrook, N. Y.
Enterprise Mfg. Co. Philase English.

Commission Merch Cas. English.

Goddard Server Co. Philase English.

Goddard Server Co. English.

Little Chas. E. 69 Fulton N. Y.

I'micbles, Manufacturers of.

Newkunet Adam, 1837 N. Front. Phila.

Strow. Wile & Co., 109 Market. Phila.

Strow. Wile & Co., 109 Market. Phila.

Strow. Wile & Co., 109 Market. Phila.

Strow Combon.

Goddard Server Co., 100 Lonace. N. Y.

Sarholomew C. Combon.

Goddard Server Co., 100 Lonace. N. Y.

Sarholomew C. Combon.

Server Combon.

Server Co., 100 Lonace. N. Y.

King. Briggs & Co., 89 Chambers. N. Y.

Ward Asilne. 101 Duane. N. Y.

Ward Asilne. 101 Duane. N. Y.

Ward Asilne. 101 Duane. N. Y.

Wilson Hawksworts. Ellison & Co., 22 John. N. Y.

Carlers. Manufacturers of Ell. Mass.

John Gullery Co., 49 Chambers. N. Y.

Woods Cuttery Co., 49 Chambers. N. Y.

Wender Control Cuttery Co., Warrien, N. H.

Dag Muzzier. Maker of.

Mersereau W. T. & J., & Duane. N. Y.

Deor A larms. Maker of.

Poor A larms. Maker of.

Poor A larms. Maker of.

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Newton & Co., Albany, N. Y. 47
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Newsumet Phillip. 26
Newton & Co., Albany, N. Y. 47
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Flint and Emery Paper and Cloth. Baeder, Adamson & Co., 730 Market, Phila Fluting Machines, Makers of Felder Chas., 113 Chambers, N. Y. Founders and Machinists. Garrison A. & Co. Pittsburgh, Pa. Galvanized Iron. Lofterts Marshall Jr., 90 Beekman, N. Y., Gas Fixtures. Makers of. Bradley & Hubbard Mfg. Co., 21 & 23 Barclay, N. Y., 40 Shive Governor Co., Bethlehem, Pa., Grain Scoops (Corugnited Strap). Semple, Birge & Co., St. Louis, Mo. Grindstones. Wood Waiter R., 283 and 285 Front. N. Y. Wortmigton & Sons, North Amherst, O., Grindstones. Wood Waiter R., 283 and 285 Front. N. Y. Wortmigton & Sons, North Amherst, O., Grinds & Co., 10 N. St. M., Philadelp Windmiller Louis & Roelker, 20 Reade N. Y. Gropowder, Makers of, R. Co., 10 N. Stxth. Philadelp Windmiller Louis & Roelker, 20 Reade N. Y. Lafin & Rand Powder Co., 21 Park Row, N. Y. Lafin & Rand Powder Co., 21 Park Row, N. Y. Hammers, etc., Manufacturers of, Emmet Hammer Co., Brocklyn E. D., N. Y. Hammers, etc., Manufacturers of, Emmet Hammer Co., 105 Reade, N. Y. Handlee, Makers of, 105 Reade, N. Y. Hardware, Makers and Galvantzed. Tiebout W. & J., 290 Pearl, N. Y. Hardware Commission Merchants, Y. Graham & Haines, & Chambers, N. Y. Heaton & Denckla, Phila, and N. Y. Waibringe G. B. & Co., 90 Chambers, N. Y. Waibringe G. B. & Co., 90 Chambers, N. Y. Waibringe G. B. & Co., 90 Chambers, N. Y. Waibringe G. B. & Co., 90 Chambers, N. Y. Waibringe G. B. & Co., 90 Chambers, N. Y. Waibringe G. B. & Co., 90 Chambers, N. Y. Waibringe G. B. & Co., 90 Chambers, N. Y. Waibringe G. B. & Co., 90 Chambers, N. Y. Waibringe G. B. & Co., 90 Chambers, N. Y. Waibringer B. G. C. & G. Beekman, N. Y. Wilson J. Clark & Co., 81 Reade, N. Y. Shepara Sldney & Co., 81 Readen, N. Y. Wilson J. Clark & Co., 81 Readen, N. Y. Wilson J. Clark & Co., 81 Reamners, N. Y. Wilson J. Clark & Co., 81 Reamners, N. Y. Wilson J. Clark & Co., 81 Chambers, N. Y. Wilson J. Clark & Co., 81 Chambers, N. Y. Wilson J. Clark & Co., 81 Chambers, N. Y. Wilson J. Clark & Co., 81 Chambers, N. Y. Wilson J. Clark & Co., 81 Chambers, N. Y. Wilson J. Clark & Co., 80 Chambers, N. Y. Wilson J. Clark & Co., 80 Chambers, N. Y. Wilson J. Clark & Co., 80 Chambers, N. Y. Wilson J. Clark & Co., 80 Chambers, N. Y. Wilson J. Clark & Co., 80 Chambers, N. Y. Wilson J. Clark & Co., 80 Chambers, N. Y. Wilson J. Clark & Co., 80 Chambers, N. Y. Wilson J. Clark & C Turnor R. A., 31 Unamores, N. 1
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Esterprise Mig. Co., Phila.
Buffalo Hardware Co., Buffalo, N. Y.
Esterprise Mig. Co., Phila.
Jacobus & Nimick Mig. Co., 288 Pearl, N. Y.
Jacobus & Nimick Mig. Co., 288 Pearl, N. Y.
Jacobus & Nimick Mig. Co., 288 Pearl, N. Y.
Lane, Gale & Co., Troy, N.,
Many & Marshall, & Warran, N. Y.
Many & Marshall, & Warran, N. Y.
Miller's Falls Mig. Co., 28 Beckman, N. Y.
Pratt & Co., Buffalo, N. Y.
Providence Tool Co., Providence, R. I.
Schweitzer Mig. Co., 57 Reade, N. Y.
Shattuck W. F. & Co., 118 Chambers, N. Y.
Williams, White & Churchill, 38 Warren, N. Y.
Williams, White & Churchill, 38 Warren, N. Y.
Williams, White & Churchill, 38 Warren, N. Y.
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Chambers & Quilhalan, Decatur, III.
Holating Engines, Maker of,
Crane Bros. Mig. Co. Chicago, III.
Otts Bros. & Co., 38 Broadway, N. Y.
Horse Hay Forks and Fixtures, Makers of,
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Brunding & Co., Middletown, N. Y.
Globe Nail Co., Boston, Mass.
Platt. & Co., Buffalo, N. Y.
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Bracher T. W. T. Greene, N. Y.
House Farnishing Goods,
Bracher T. W. T. Greene, N. Y.
House Farnishing Goods,
Bracher T. W. T. Greene, N. Y.
House Hardshard, 24 Columbia, N. Y.
Lee 'to Is.,
Carter W. H. To Chambers, N. Y.
Landing Co. Chicabors, N. Y.
Landing Co., Chambers, N. Y.
Landing Co., Chambers, N. Y.
Landing Co., Chicabors, N. Y.
Landing Co., Chambers, N. Y.
Landing Co., Chambers Tiff & Roward, 12 Murray, N. Y. Hydraulie Jacks,
Dudgeon Richard, 24 Columbia, N. Y. Ice, 16 st., 100 Chambers, N. Y. Insurance, Boiler.
Hartford Steam Boiler Inspection and Insurance Iron Brokers.
Boynton Geo. W. Wall, N. Y.
Boynton Geo. D. John, N. Y.
Hatry A. &. Pittsburgh, Pa.
Hazard & Jones, 284 Fearl, N. Y.
Read & Dickey, Cleveland, O.
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Iron, Charcoal, Warm or Cold Blast, Quincy John W., 38 William, N. Y.
Iron Commission Merchants, Althouse Geo. D. 31 Wainut, Philadelphia, Justice Cox Jr. & Co., 338 Walnut, Philadelphia, Justice Cox Jr. & Co., 338 Walnut, Philadelphia, Conkila Henry, 14 John, N. Y.
Hand Jas. C. & Co., 64 and 636 Market, Phila, Money, Co., 228 Dock, Philamut, Phila, Spooper & Collins, St. Lonis, Mo.
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Iran Dealers. Spooner & Comas, C., 10th, Mo.

Fron. Fig. Disporters of.

Will, N. Y.

Handlere & Co., 69 Wall, N. Y.

Bonnell Botsford & Co., 70 Ungstown, O.,

Borden & Lovell, 79 and 71 West, N. Y.

Cleveland, Brown & Co., Cleveland, O.

Coddington T. B. & Co., 25 Uff, N. Y.

Huerstel G. 99 Market Silp, N. Y.

Fuller, Lord & Co., 128 Greenwich, N. Y.

Fuller, Dana & Fitz, 110 North, Boston,

Gardner Win., 59 Gist, 152 West, N. Y.

Fuller, Dana & Fitz, 110 North, Boston,

Gardner Win., 59 Silo, 52 West, N. Y.

Harrison of Commission of the Commission of Co Richards D. W. & Ust., be Manugin Carlos and Girard Rolling Mill Co. Girard. O
Leonard Ionn. 480 451 West st. N. Y.

Milwaukee Iron Co. Milwaukee, Wis.

Navior & Co., 6 Oliver, Boston.

Old Dominion Iron & Nail Works Co., Richmond, Va. 6
Oxford Iron Co., 81 Washington, N. Y.
Phenix Iron Co., 410 Wainui, Phila.

Sterling Iron and Railway Co. 41 Pine, N. Y.

Sterling Iron and Railway Co. 42 Pine, N. Y.

Sterling Iron and Railway Co. 43 Pine, N. Y.

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4 Tron, Swedish, Importers of,
Jessop Wm. & Sone, 91 and 93 John, N. Y.

8 Meys and Cotters. Manufacturers of,
Barnes Geo. & Co., Syracuse, N. Y.

8 Koi ting Machines, Ipraght Motary, Makers of,
Clark Tomphins & Co., Iroy, N.

18 Lamps. Manufacturers of,
Patent Mechanical Lamp Co., 138 Chambers, N. Y.

19 Lanserss. Manufacturers of,
Patent Mechanical Lamp Co., 138 Chambers, N. Y.

10 Howard & Morse. & Fulton, N. Y.

10 Howard & Morse. & Fulton, N. Y.

11 Barlow & Sec., Manufacturers of,
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Branford Lock Works, Branford, Conn.

8 D.

Romer & Co., Newski, N. 4. Boths. Manufactures of Bondway and Kossuth, Brooklyn Bohannan Wilson, Broadway and Kossuth, Brooklyn Branford Lock Works. Branford, Conn. 34
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American Screw Co., Frovidence, R. I. 13
Lyon & Fellows Mfz. Co., Williamsburg, N. Y. 26
Reynolds & Co., New Haven, Conn. 4
Roohaster Machine Screw Co., Rocnester, N. Y. 13
Machinetts Teols. Makers of.
Baisdell P. & Co., Worcester Mass.
New Haven Mfg. Co., New Haven, Ct. 99
Machinery and Foel , Imperies of.
Graham Bros., 122 Cannon street, London, E. C. 37
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Keuffel & Esser, 111 Fulton, N. Y. 40

Measuring Tapes.

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Cott Edward W., 1859; Walnut, Phila.

Cott N. L. & Co., 220 & 222 Water, N. Y.

Crocke Broc., 32 Cliff, N. Y.

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Crocke Broc., 32 Cliff, N. Y.

Lefferts J. C., 32 Peaning, This.

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Hartuna John, 1042 Ridge avenue, Philadelphia.

Hartuna John, 1042 Ridge avenue, Philadelphia.

Metropolitan Nickel Plating Co., 138 West 25th, N. Y.

Norway Shapes, Rollers of.

Rowland Wm. & Harvey, Frankford, Phila..... Norway Shapes, Kollers of,

Rowland Wm. & Harvey, Frankford, Phila.

Note Broiler.

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Nuta. Bolta. etc., Mokers of,

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Arms. Bell & Co., Youngskow, O.

Carpenter David, & Waiter N. Y.

Clark Bros. & Co., Mildale. Conn.

Fuller, Lord & Co., 198 Greenwich. N. Y.

Haskell W. H. & Co., Pawtucket. R. I.

Hoopes & Townsend. 1399 Buttonwood. Phila.

Lewis, Oliver & Phillips, Pittsburgh. Pa.

New Hav. n Nut Co., Westville. Cf.

Ola Colony Rivet Works, 18 Chambers, N. Y.

Koseberry Geo. D., Pottaville, Pa.

Russell, Birdsail & Ward, Port Chester, N. Y.

Plumo, Burdlet & Barraard, Burdaio, N. Y.

Shelton Co., 18 Beekman, N.

Union Nut Co., 78 Beekman, N. Y.

Oli Stanes, Mikers of,

Boyd & Chase, 107th aircet and 1st avenue, N. Y.

Oli Tranks,

Wetzel E. F. W., 75, Warren, N. Y.

Old Iron, etc.

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Old Iron, etc.,
Gregs H. L. & Co., 108 Walnut, Philadelphia.
Granmental Iron Works.
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Bilde Crusher Co., New Haven, Ct.
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Gianding Jas. & Co., 116 Queen, Philadelphia....
Paints. Ore Urushers.
Blake Crusher Co., New Haven, Ct., Manufacturers of, Brecking for Engines, &c., Manufacturers of, Glanding Jas. & Co., 115 Queen, Philadelphia.

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Pareut Solicitors.
Olive F. W. & Co., 117 Fulton, N. Y.
Pareut Solicitors.
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A. Burke & Fraser, 37 Park Row, N. Y.
Burke & Fraser, 37 Park Row, N. Y.
Howson & Son, Phila, and Washington, D. C.
Munn & Co., Scientife American, 37 Park Row, N. Y.
Howson & Son, Phila, and Washington, D. C.
Munn & Co., Scientife American, 37 Park Row, N. Y.
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Collins & Co., Haurray, N. Y.
Pipes, Flittings, etc., Manufacturers of,
Richards T. C. & Co., 67 Murray, N. Y.
Pipes, Flittings, etc., Manufacturers of,
Richards T. C. & Co., 68 E. 16th st., N. Y.
Solson, Flack & Co., 68 E. 16th st., N. Y.
Solson, Flack & Co., 68 E. 16th st., N. Y.
Solson, Flack & Co., 68 E. 16th st., N. Y.
Pipe Threaders, Cutters, &c.
Converse, M. D. & Park Place, N. Y.
Brick R. A. & Co., 112 Leonard, N. Y.
Brick R. A. & Co., 112 Leonard, N. Y.
Brick R. A. & Co., 112 Leonard, N. Y.
Solson, Flack Row, N. Brindmy, N. Y.
Pipe, Water and Gas, Makers of,
Brick R. A. & Co., 18 Gold, N. Y.
National Tube Works Co., 18 William, N. Y.
Solson Packing.
Canneld John & Co., 152 Fatrmount Ave., Phila, 33
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Buck Broa, Millbury, Mass.
H. Chapin's Son, Pine Meadow, Conn.
H. Chapin's Son Pine Meadow, Conn.
H. Chapin's Son, Pine Meadow, Conn.
H. Chapin's Son, Pine Meadow, Conn.
H. Chapin's Son Pine Meadow, Conn.
H. Chapin's Son Pine Meadow, Conn.
H. Chapin's Son Valley Mcn. Co., Essential Pyrometers. Brown Edward, 311 Walnut, Phila. Railroad Supplies. Potter. Hoffman & Co., 110 Liberty, N. Y. Potter, Hoffman & Co., 110 Liberty, N. Y.

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Atkins Bros., Pottsville, Pa.
Cambria Iron Co., Johnstown, Pa.
Cambria Iron Co., Johnstown, Pa.
Cleveland Rolling Mill Co., Cleveland, O.
Griswold John A. & Co., Troy, N. Y.
Milwankee Iron Co., Milwankee, Wis.

Razor Straps. Makers of.
B. F. Badger, Chailestown, Mass.

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Rivets. Tryon E. K., Jr., & Co., 320 N. 2d, Philadelphia.

Rivets.
Old Colony Rivet Works, 116 Chambers, N. Y.
Timmes Peter. 251 North 6th. Brooklyn, E. D...
Road "crapers & c.. Makero aly,
Revolving Seraper Co., Columbus, O.
Rolling Mill Magchinery, etc., Manufacturer
Birmingham fron Foundry, Birmingham, Ct.
Moore James. Cor. 16th and Buttonwood, Phila.

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Stantev dule and Level Co., 35 Chambers St.
Snad and Emery Paper, Makers of
Beader, Anamson & Co., 730 Market, Phila.
Snash Welght & ecctionally, Manufacturers of.
Sprague Sash Welght Co., Youngstown, O...
Sash Locks, Marcra of. Sand and Emery Fraper. Makers of
Beader, Adamson & Co., 730 Market, Phila.
Sash Weights Overcloun!, Manufacturers of.
Sash Locks. Masers of.
Hammond W. S., Lewisberry, Pa.
Sanks. Locks. Masers of.
Hammond W. S., Lewisberry, Pa.
Sanks. Makers of.
Atkins E. C. & Co., Indianapolis. Ind.
Boynton E. M., 60 Beckman, N. Y.
Flint J. & Co., Rochester, N. Y.
Speac & Jackson, I. Ile Duane, N. Y.
Sheves, Makers of, Speach, N. Y.
Shevels, Makers of, Speach, I. I.
Miles F. S., Mogustry, Phila.
Shattuck W. F. & Co., Ill Chambers, N. Y.
Flein Alfred & Co., 98 Chambers, N. Y.
Shevels, &C.
Clement & Hawks Mfg. Co., Northempton, Mass.
Middleboro Shovel Co., & Oliver, Roston.
N. Y. Shovel Works (Screening Shovels), 1308 BroadSmelting Werks.
Reeves Paul S., 730 South Broad St. Phila.
Shatting Werks.
Reeves Paul S., 730 South Broad St. Phila.
Shamped and Japanned Tip Ware.
Schelder Jos. & Co., 23, 74 & 75 Lake, Chicago
Steam Hammaers, etc., Makers of, Malaletown Toc. Co., 18 deckman, N. Y.
Spikes, Frank & Co., 18, 18 & 20 Cliff, N. Y.
Spikes, Frank & Co., 18, 18 & 20 Cliff, N. Y.
Spikes, E. R., & Co., Manufacturers of Midatetown 10. 28 William, N. Y. Spilegel, Quincy John W., 28 William, N. Y. Spilege, R. R. &c., Manufacturers of Fahrion, G. W., Niles, Ohio, Starte Adolph, 4tl East 10th, N. Y. Fanton, G. W., Nies, Onlo.
Starke Adolph, 4tl East 10th, N. Y.
SpringsRowland Wm. & Harvey, Frankford, Phila.
Squarres, Steel and Iron, Makers of,
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Steenm Pamps, etc., Manyfacturers of
Carr A. 46 Cortlandt. N. Y.
Crane Bros. Mg. Co. Chicago, III.
Enterprise hydraulic Works, 24h Race St., Phile.
Hall C. Heary & Co., 26 Cortlandt. N. Y.
Knowis Steam Pump Works, Warren, Mase.
Philadelphia Hydraulic Works, cor. Evelina and
Levant, Philadelphia.
Steele & Condict, 58 Liberty, N. Y.

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Townsend & Blessing, Albany, N. Y.... Steel Castings.
The McHaffie Steel Castings Co., Evelins and Le Streets, Philadelphis.
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Cocker Bros., Sheffield, England.
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Hobson Francis & Son, 104 and 105 John, N. Y.
Jessop Win, & Sons, 91 and 185 John, N. Y.
Jessop Win, & Sons, 91 and 185 John, N. Y.
Fiersons & Co., 22 Broadway, N. Y.
Sanderson Bros. & Co., 16 Cliff, N. Y.
Sanderson Bros. & Co., 16 Cliff, N. Y.
Sanderson Geo, & Co., 51 John, N. Y.
W. Hawkewortt, 104 and 185 Duane, N. Y.
W. Hawkewortt, Eldon, N. Z.
W. Hawkewortt, Eldon, N. Z.
Steel Manufacterers.
Anderson & Woods Pittaburgh.
Chrume Steel Co., Brookkyn, E. D.
Cleveiand Rolling Mill Co., Levelund, U.
Gautter D. G. & Co., Lersey City, N. J.
Farlst & Windsor Bridgaport, Ct.
Granwold John A. & Co., Troy, N. Y.
Brassey, Wells & Co., Pittaburgh. Smith, Satton & Co., Pittsburgh, Pa.
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Joseph Dixon Cruchibe Co., Jersey City, N. J.
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Morse Twist Drill & Mach. Co., N. Bedford Mass.,
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Weod Teolas, Makers of
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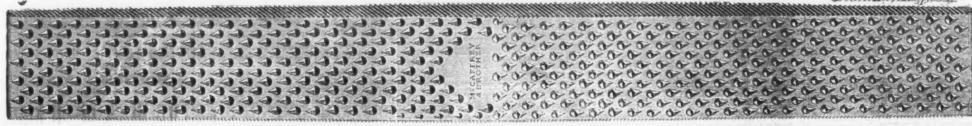




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Foreign Preparations for the Centennial. Its department thoroughly and make sure that | Western States, will send many articles, and | and Portugal are expected, though, I believe,

read with interest :

World's Fairs in Europe, and were aware that fair as an instrument to forward these objects. intercourse with us these vast assemblages of the people and the products of all nations bad come to be looked upon space allotted it in the exhibition buildings exhibits are fully assured. Norway has asked hibits, and have been awarded liberal space. there as powerful agencies in advancing civili- insufficient, erected at its own expense three im- not to be confounded with Sweden, and wants Mr. J. Perroult, Secretary of the Canadian Comzation, never doubted that the international features of the Centennial Exhibition would be successful. It will not surprise them, but it will both astonish and gratify those who, from want of information, were skeptical upon this will be the greekfeel upon this surprise them. The successful is the greekfeel upon this successful is will be the greekfeel upon this successful. It will not surprise them, but it will be the greekfeel upon this successful. It will not surprise them, but it will be the greekfeel upon this successful. It will not surprise them, but it will be the greekfeel upon the surprise them the greekfeel upon this successful. It will not surprise them, but it will be the greekfeel upon the surprise them the greekfeel upon the greekfeel upon the surprise them the greekfeel upon the surprise them the greekfeel upon the gr want of information, were skeptical upon this points, to learn that the question now troubling Director-General Goshorn and his assistants, is not how to persuale foreign countries to send which, under the liberal policy of the Andrassy Copenhagen, collections illustrating the mantheir wares hither, but how to find space for ministry, is making great efforts to extend her such as are freely offered. Every day brings commercial relations and introduce her manufresh evidence that the foreign departments factures abroad. The advice and aid of Baron will be crowded, and that there will not be Schwarz-Senborn, General Director of the Viroom for all the articles which exhibitors will enna Exhibition, and now the Minister of Austria want to display. The commissioners of several to this country, will make this department of countries have already requested more space great interest and value. All the countries' than has been assigned them on the preliminary dainty articles for ornament and use which the chart of the main building. On Saturday a skillful Vienna artisans make of leather, ivory, letter was received from the Commissioners of amber, meerschaum and mother of pearl w the Netherlands-a country which was put be displayed, together with the cloths of Modown for 7776 squre feet of floor space conjoint- ravia, the exquisite glassware of Bohemia and ly with Denmark-objecting to this partnership arrangement, and saying that the Netherlands Hungary will probably insist upon a separate for the two countries. Although the Dutchare diagram, put her in the Austrian department. not a manufacturing people, they will bring many goods, because included in their depart ment will be the products and fabrics of their At Vienna they had their own commission, and rich East India colouies. A letter from one of walled their department off from that of Austria the Spanish Commissioners, which came the with their tri-colored flags of red, white and same day, says that Spain will fill twice the green. It may be, however, that as the two space occupied by her at the Vienna Exposition. She made there a display that was considered tions with other nations, under the name of the very creditable, in view of her civil wars and Austro-Hungarian Empire, there will be no unstable government, but Cuba and her other separation of their exhibits at the Centennial. West Indian possessions were scarcely repre- Hungary is an agricultural country, rich in corn this will soon be done, and that the collections sented at all. On account of the close commercial and wine, and in the partially developed miner- of mosaics, cameos, corals, statuary, Venetian relations of the United States with the Spanish- al stores of the Carpathian Mountains, but her

not a single creditable industry of the German the kindly feeling of most Hungarians toward not yet definitely promised. The following communication from Philadel- people is omitted. Beside, it is exceedingly the United States, on account of the reception There has never been much question as to phia, bearing date of February 20th. will be ambitious of enlarging German commerce, and given Kossuth in this country, will have its Great Britain's hearty participation in the Center of the reception of the r introducing German manufactures everywhere, effect in bringing to Philadelphia the best tennial. Col. Forney's visit to London appears Those who knew of the interest taken in and understands the great value of a world's manufactures of a people having so little trade to have stimulated increased interest among the

the iron products of Styria and Carinthia. would want the whole amount of room allowed | department, although the commission, in their The Hungarians are very sensitive about the rerognition of their recently regained nationality. countries present a united front in their rela-American colonies they will, it is believed, send manufactures are in their intancy, having more articles to the Exhibition than the mother scarcely had time to gain a footbold since the Vienna and Paris fairs, will be displayed in country. The greatest display made by any abandonment of the repressive policy in Philadelphia. Switzerland will show her ex-European country will, no doubt, be that of the Austria. The prosperous capital of Buda- qui-tie laces, her watches and mathematical in-German empire. The German government is Pesth, whose growth during the past eight struments, and the curious wood carvings for

From the Scandinavian countries interesting ners, customs, and industries of Iceland and

France will crowd the space assigned her. and her department will no doubt be the most orderly and systematically arranged of any, and at the same time the most brilliant. Its abundance of articles of display, jewelry, bronzes, silks, velvets, and laces, will secure for it the latter distinction, while the French bureau system that works like a clock amid political turmoil and changing governments, will produce an exhibit which for completeness and perfect classification will be a lesson to unmethodical Americans.

Russia, there is reason to fear, will not be represented, unless by the voluntary contributions of ner people unaided by their government. The Czar, it is asserted, does not forget the alleged lack of courtesy shown by President Grant to the Grand Duke Alexis when the latter visited Washington, and is disposed to punish the managers of the Centennial for the sins of

Italy has not yet appointed a commission, but glass. Genoese silk and other beautiful articles which were the wonder of all nations at the sufficiently paternal in its character to organize years has surpassed that of many cities in the which she is famous. Exhibits from Greece yet been made.

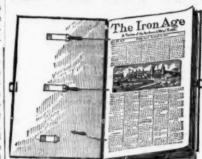
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leading English manufacturers. All the principal British colonies will make separate exfor space, and several have their Commissions already organized. Brazil and Chili will take the lead in the extent of their exhibits; but all will surpass their rather meager contributions to previous World's Fairs. The same may be aid of Mexico and the Central American States, Half Cloth. while the little Huwaiian Kingdom, whose monarch was lately the nation's guest, will send her tropical agricultural products in great abundance. The managers are not so certain of as full a display from the Oriental countries as is desirable. Egypt and Japan hold out the Half Roan .... best prospect. The enlightened ruler of the former country, surrounded as he is by a staff of American officers, will unquestionably give good deal of attention to the exhibition, and Japan will assuredly be well represented. What will be done by Turkey, Persia, Siam, and China is not yet known. There is talk of sending a special commissioner to all the Eastern nations, beginning with Turkey and ending with Japan, to furnish information and make selections of articles to be sent to the exhibi-bitions of articles to be sent to the exhibi-

In this brief review of the part foreign countries are likely to take in our American World's Fair, it may be well to add that of the total floor Fair, it may be well to add that of the total floor space in the main exhibition building, amounting to 485,000 square feet, the United States will occupy 123,160, and all other nations 340,-432 square feet. This allotment leaves 21,408 square feet undisposed of and reserved for future contingencies. The assignment of space to different countries is only provisional, and is therefore not worth publishing at present. No diagram partitioning the space in the machinery, agricultural and horticultural halls has yet been made.

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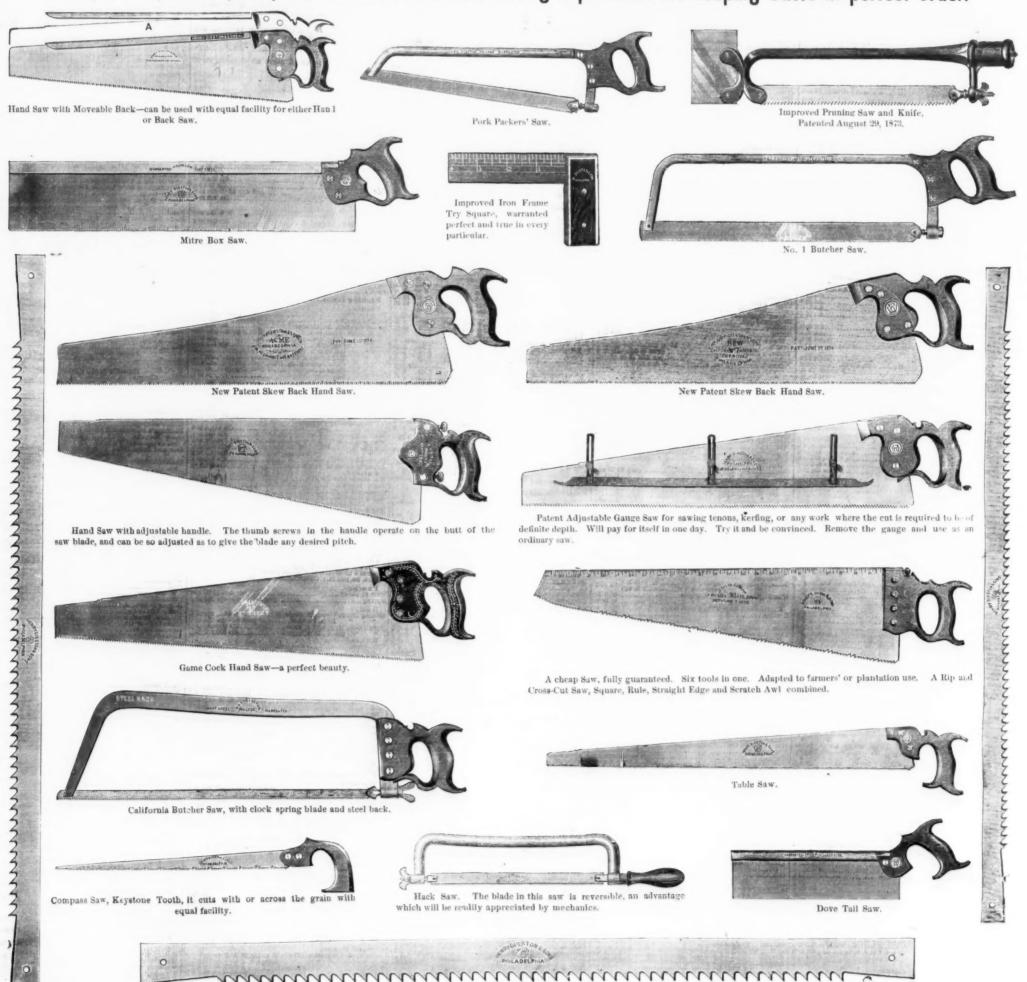
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Keading	Chain Engas Coll 12% 9% 8% 7% 7% 7%	Fry Pans   dis 45 s   dos   4	Lines. Lines Fish Cotton Chalk.  8ll. Lake Chalk.  Nos. 0, 1, 3, 5, \$6, \$50, 7, 750, dis 20 \$	Saw FramesDer gross \$18 00-dis 10&10
Ciliax Sicer	Chata  Engust Coll  12 9 9 9 9 1 7 79 7 7 7 7 7 7 7 7 7 7 7 7	Tiff & Howard	Mason's dis 20 mas dis 20 mason's di	
IVES die 40 @ 404-10 C	Univarized Pump Chais	Wire. dis 10 5  Gimlers. Nail and Spike. dis 25&10 5	Cablnet(iavlord   dis 25 x   Eagle   dis 25 x	Inserted Cross Cuts, all kinds. 65c \( \phi\) foot All else
Second   S	White. \$\partial \text{gross}\$, 51c net Red \$\partial \text{gross}\$, 90c net Blue \$\partial \text{gross}\$, \$\partial \text{u}\$ net respectively.	" Ives	Barnes & Deitz   dis 25	Will   dis 25
Andrews' Bits dis 40&00 Cook's Bits dis 50 S dis	Chiseis.  Socket Framing, Douglass	Grind Stone Fixtures   dis 65&1) S   Sargent's Patent   dis 65&1) S   Reading Hardware CO   dis 66%&7% S   Bart Mrg. CO. S   dis 60&5&10 S   Hammers.		Livingston's But, her and Kitchen. dis 10- H. W. Peace's Circulars. dia 10- Other kinds. dis 10-k Wm. McNiece's hang Cross Cut and Cir.
Cook's Bits. this 40x40x10 to \$40x40x10 to \$40x40x10 to \$40x40x10	White Orayons	Hammer Hammer Co.'s Handled	Norwich Russell & Erwin Norwich Pay'd list of Jan 75	Other kinds. dis 10 s  Wm. McNiece's hand, Cross Cut and Circular.  Wm. McNiece's Patent Pole Pruning Saw. dis 10 s  Compass Saw. dis 10 s  k. M. Boyaton's Lightning. dis 40 s for immediate cash
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ti Danglasa' dis 2ME10 % I		Warner's list net  Hand Cuffs and Leg Irons. Tower's Hand Cuffs, 34 0) per pair. dis 25 %  Leg Irons 36 50 per pair. dis 25 %  Providence Tool Co.'s Hand Cuffs , \$15 per doz { dis 10 %  Leg Irons 35 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	Jacobus & Nimick Mfg. Co	Siliman's Genuine
1/42   dis 25 %	Judd's         dis 45&10 %           Lambert's         dis 25 %           Frovidence Tool Co         dis 10 %           Clips, Axie.         dis 30 %           Norway or Best         dis 30 %	Providence Tool Co.'s Hand Cums , \$15 per GOZ { dis 10 % Leg Irons 25 " dis 10 % Handles. Wrought Chest	Wm. wilcox & Co.     dis .5 x	Hart's Patent   dis 15     Nash's   dis 20s to     Bernis & Call's   dis 20s to     Bernis & Call's   for doz 5 5 0 dis 16     Common Lever   per doz \$2 00 dis 16 10 dis 20     Leach & dis 15
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A win and Toolsdis 25 5 Aiken 26dis 25 5 Aiken 27dis 25 5 Aiken 27di	"Star," Superior Philadelphis. dis 45a5 s  Coni Shovels. [100 April 10 Apri	### Log Irons 25  Wrought Chest.	Maliets.	Scales.   Hatca, Counter   P doz \$36—dis 25
Stanley's Excelsion. \$13 30—qus 2000 to 78  A x p = 6  Erook's per doz \$12 00 @ 14 0) net  prood's per doz \$2 00 @ 15 00  and \$12 50 @ 14 00.	Galvanized	Woolworth Are, Fick and Stedge	# doz. \$14.00 \$17.00 \$19.00 \$30.00 dis 10 % Miles Challenge	Brown's dis 250 Fairhanks' hew list dis 15 66 20 Howe's dis 156 55 Shattuck's Counter and Union dis 156 Chatillon's Grocers' dis 25 Eureka dis 25 Universal Family dis 20
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Gong, Abbe's. dis 15&10 % Yankee. dis 20&10 %	Cast Steel. P 11c. net Iron, steel points. P 5 6c	Shingling, Nos. 123	Olymphodia dia 98.6.10.6	Dismingham Salar Co (A Flord & Co ) die fut & too :
Yankee         dis 30k:10 %           Barton's         dis 33% %           Cank Taylor's         dis 50 %           Cone's         dis 50 %           Cone's         dis 10 %           Cone's         dis 90 %           Lever, Sargent's         dis 90% to \$10 %           Lever, Sargent's         dis 30% to \$10 %           dis 25 %         dis 25 %	Cracibles, Gautier & Co	Latting, 123, 9 doz 9 0 8 50 9 0 Claw, 123, 9 doz 80 8 50 9 0 Latting, 123, 9 doz 80 8 50 50 10 0 Latting, 123, 9 doz 80 8 50 10 0 Claw, 123, 9 doz 80 8 50 10 0 Claw, 123, 9 doz 80 8 50 10 0 Claw, 123, 9 doz 80 8 50 10 0 Claw, 123, 9 doz 8 0 8 50 10 0 Claw, 123, 9 doz 8 0 8 50 10 0 Claw, 123, 9 doz 8 0	Shees.   Park	Beuch -   Iron
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Brook's   dis 50 %   Western   dis 25 %   Gow - Common Wrought   dis 25 %   Gow - Common Wrought   dis 20 %   Gos - Go	Cuttery, American Table 5 Meriden 8 New list Jan. 75, dis 25 8 American Pocket 8 Cuttery Co 5 dis 25 8 Am. Pocket—Humason & Beckley Mfg. Codis 308:0 8 Dippers. per doz 7:50—dis 30 %; by bbl. dis 308:0 8 Bitannia per doz 7:50—dis 30 %; by bbl. dis 338 %;	Shingling, Nos. 0 1 2 S doz \$7 50 5 00 5 50 9 00 Claw, 1 2 S doz 9 00 9 50 10 00 Lathing 1 2 S 8 doz 8 00 8 50 9 00	Picture Nails and Knobs   dis 60&10 5	"Young America 9 59 "Silver Clipper 1,2 65 Scythe Snaths dis 20 5 Sieves.—Mann's Parent dis 25 5
Ya w's Gename   Class 30 %   Texas   Class 30 %   Cell   Ce	Pippros   Pipp	Broad, 12 S. 7 doz 9 00 10 00 12 00 12 00 13 00 12 00 15 00	Pinking Irons	
Moulders dis 15 % Moulders dis 10 % nand Bellows dis 10 % Hifned Adjusters.—Domestic © doz \$3-qis 20 %	Embossed Gift dis 20 st. Leakher dis 20 st. Leakher dis 20 st. Brass dis 20 st. dis 20 st. dis 20 st. Brass dis 20 st. di	Shingling, Nos. 1 2 3. \$\ \phi\$ dox \$8 00 \$ 50 \$ 9 00\$ Claw, \$\ \cdot 1 2 3. \$\ \phi\$ dox \$9 00 \$ 50 \$ 10 00\$ Lathing. \$\ \cdot 1 2 3. \$\ \phi\$ dox \$0 0 \$ 50 \$ 9 00\$ J. \$\ \cdot V \text{erres & Co.} \$\ \cdot \c	Plaking Irons. per dos % 15—dis 45 5  Planes.  First Quality. dis 55 5  Second Quality. dis 25 2  Bailey a Fatent Adjustable. dis 20 2  Aubura Fool Co. \$5 50 to 2 gold—new list  Greenfield Tool Co. dis 25 5  Greenfield Tool Co. dis 10 14 141  Middletown Tool Co. del 11 141  Ohio Tool Co. del 11 15  Ohio Tool Co. dis 10 3	Cast from
Blind Fasteners. dis 30 5 Van sand's, No. 5000, \$13°50; No. 5005, \$10°50 net Washburd's Patent \$\psi\$ gross 14 00 Merriman * ne w list net	Johnson'sper doz \$8 00 @ 4 00 Palmer's Japanned No doz \$5'00 } " Coppered " 6'00 } dis 20 £ " Silvered " 5'00 }			Sliding Door
Blind Staples.  Boardman's Patent, % in. and larger. P B 3: c 43 c Blocks.	25 des 64 00 0 5 95 de 40 40 g	Tath (mg 41 199 99 Apr 19 00 11 00 18 00	Plow Bits, Greenfield Tool Codis 10 %	Shovels and Spades. Ames
	Barker's Concealed	Hinges	Pliers and Nippers. Button's Patent. Hull's Patent Nippers. Leach's Fateat Wire Cutters. Plumbs and Leyeis dis 66626105	Birmingham Shovel Co.   dis 15 5
Cast trou Barrel, Shutter, &c	Hart Mfg. Co., No. 1       dis 60 %         Merrill       dis 60 & 10 %         Bradley's       dis 25 %         Ad lustable Handle       dis 15 %	Screw Hook and Strap	Leach's Patent Wire Cutters	Dunning's Shovels and Scoops.       dis 2047%         Snow Shovels.       2 doz \$7 (0 2 8 00 net         Shovels and Tongs.       3 dis 20 5 5 5
die tekto e	Drille.	Heavy Welded Hook 144m & no co fire net	Non-Adjustable	Polished Steel new list dis 50 %  *kates.  Barney & Berry's  *Club.  *Proje 22.75
Wrought from Finish, Staniery s.   Gais 2004/104/10/5     Carriage and Tire, Common.   dais 2504/104/10/5     "Norway from   dais 203/10/5     "R. B. & W   (old list) dais 60/3     "Philadelphis, Star   dais 55/5     Eagle   dais 55/5     K. B. & W   dais 20/6 22/5     B. B. & W   dais 20/6 22/5     Boring Machines   list. \$\pi\$ h   Bering Machines   dais 15/5	Blacksmiths'. each \$2 00 art Breast, 7 : 5. & W dis 166:10 \$2 5 \\ "Miler's Fails dis 2.5 \\ "Alken's \$2:50; 4:00, dis 40 \$2 \\ "Hotchkins' dis 10 5 \\ Ratchet, Merril's dis 2.5 \\ "Wifting's dis 2.	Screw Hook and Eye, Sargent's % inch. Per doz pairs \$4.75 7.25 10.25—dis 65&10&10 %	Jap'd Screw   dis 60&10 %     Brass Screw   dis 60&10 %     Brass Screw   dis 60&10 %     Jap'd Side   dis 60&10 %     Clothes Line   dis 60&10 %     Hay Fork   per do2 \$4.30 @5 \$0, dis 10 %	Skates
R. B. & W. dis 20 g liorax. lise. \$\pi\$ thering Machines. dis 15 g			Douglas Cistern, etc	American Club, Pol shed
Herring Machines	Regr Beaters   8 in   10 in	Scovili add 38% %	" Garden Engines. dis 10 %	Slates   Square Frames   Round Cornered   by case   dis 70&10 %   Square Frames   dis 70 %   Spoke Shaves   dis 20 %   Spoke Shaves   dis 20 %   dis 20
Morticing Machines each	Peerless	Hooks.   Scovil Pattern   add 15 %	Cacamber (Burlingham & Pürdy)— 6 ft. No. 8, with 12 ft. pipe	
Bargent & Co. 8. dis 80&10&10 \$  Braces. Recurrer Patent. dis 40&5 \$  Braces. dis 40&5	Peerless.	Bird Cage	Belt of Drive	By the case. dis 20 % Britannia. dis 45&10 % Rogers & Bro. A 1 dis 50 % Darby Silver Co. dis 20 %
Braces   Fatent   dis 40&5 %   Q   S   Backus   dis 40&5 %   Q   S   Backus   dis 40&10 %   Q   S   Backus   dis 40&10 %   Q   S   Backus   dis 40&10 %   Backus   dis 40&10 %   Backus   dis 40&10 %   G   Backus   dis 40&10 %   G   G   G   G   G   G   G   G   G	Glue Kettles dis 20 % Tinned Saucepaus dis 25 %  Escutcheous Same discounts as Door Locks	Clothes Line,   Hart's list	State   Stat	Spoons   dis 30x 10 %
" Hamden dis 15&10 5 Common Bell dis 15&10 5 Brack ets.—Shelf dis 60&10 6,68&10 5 Bright wire thought dis 60&10 6,68&10 5 Bright Wire Choods. dis 60&10&10&10 Hulf Rings.—Union Nut Co., new list, dis 80&10&5 5	Ennmeled and Tinned Ware.  kettles	Celling. Wrought Stanies and Hooks and Stanies dis 70&10 g Wrought Stanies and Eyes	Cast Steet. dis 30 \$ \$ \$8.00 9.00 10.00 11.00 \$ \$ \$ 10 12 14 teetb. Malleable. dis 30 \$	Teas. \$150 \$\text{ gross, net} \\ Tables. 2.75 net \\ Stocks and Dies
Hui? Rings.—Cuton Nut Co., new list.dis No&10&5 g Sargent's	" Cork Stops dis 40 % Star dis 55&10 % Frary's Patent Petrolemin dis 15&10 % Faylor's Pattern dis 20&10 %	Grass   Gis 2 / 5	\$5 00 5 50 6 00 6 50 9 11 18 15 teeth.  Razor Straps.  Evan's dis 25&10 %	Sione,
Enterprise Mfg. Co	Wood and Metallic         dis 40 %           Wood, Cork Lined         dis 60 %           Enterprise Mfg. Co., Self-Measuring         dis 20 %           Fellor Pintes         # 5 14c; dis 10 %	American Pressed # h 22c 20c 20c 20c 20c 20c 20c 20c 20c 20c	Genuine Emerson (B. F. Badger or C. Emerson)dia 23 s.   Hulation Emerson	No. 1, \$\psi\$ \times 22c net   No. 2, \$\psi\$ \times 17c net   No. 1, \$\psi\$ \times 17c net   No. 1, \$\psi\$ \times 45c net   Arkansas Stone
Common Bell.  Brackets. Shelf. dis 60a10 de 65a10 s Bright wire tsoods. dis 60a10 de 65a10 s Bright wire tsoods. dis 65a10 de 55a10 s But Hulf Rings. dis 65a10 de 55a10 de 55a  Gumon and king.  Common and king.  Common and king.  Sargent's.  dis 97 de 55a10 de 55a	#1085 American File Co #5 00 to £ currency—dis 10 @ 15 g Nichotson	Ausable	Razor Straps	Hindostan Stone
\$25-25 \$39-75 \$34-25 \$39-75 \$45-25 \$46-50 \$54-00 Butte. Wrought Brass	Rothery's	Polished, Pat. Fin " 28c 25c 23c 24c 21c 20c National, Pointed and Polished, Ex. Fin " 30c 27c 25c 24c 23c 23c New London U. B " 29c 27c 26c 25c 24c	Is bulk	Gold Medal. P gross \$6 00 dis 15 5  Steaners. Steel. dis 50 %; full cases, dis 50&10 % Iron. dis 50 %; full cases, dis 50&10 % Nickel Plated. add \$2 50 @ \$4 00 \text{ W doz net} Try Squares and T Bevels. dis 40&10 % Star Try Squares and Revels. dis 40&10 \$
Cast Frass dis 2) \$ Cast I at Joint, Narrow dis 40 65 50 \$ East Lovie Joint, Narrow dis 60 66 60 60 50 \$ Cast Lovie Joint, Narrow dis 60 66 60 610 \$		Western	# American Patent	Nickel Flated
Cast Lorse Joint, Narrow   dis 60 & 064 0 \$   Cast Lorse Joint, Narrow   dis 60 & 064 0 \$   Broad   dis 604 10 & 065 20 1 \$   Mayer   dis 50 & 50 & 10 \$   Parliament   dis 50 & 50 & 10 \$   Drilled Wire Jointed   dis 50 & 50 & 10 \$   East Joint Narrow, High List   dis 50 & 50 & 10 \$	Spear & Jackson's 5 00 to £ gold	Vulcan.         Pt'd & Blued.         88e 80e 38e 27e 28e 28e           Star urand, 16e.         Morgan.         .14e           c'utnam.         .900 lbs., dis 5 \$           Ausable.         Am. Pressed, Perkins.         Globe.           National and New London.         .1000 lbs., dis 5 \$           Vulcan.         .1000 lbs., dis 5 \$           Vulcan and Brundage.         .600 lbs., dis 5 \$	Manuracturers' List of Jan. 7, 1875.  Manila	Tacks. Full Weight American Iron. dis 45&7% 8
Drilled Wire Jointed   Gis 50 (e 50 & 10 %	1000   1000	National and New London 1000 lbs., dis 5 % Vulcan 1000 lbs., dis 5 % Vulcan and Brundage 550 lbs., dis 5 % Horse Shoes. \$\$\frac{1}{2}\text{ \$\text{Keg.} \$\$} \$\text{ \$\t	Hay Rope.   W m 14%c     Hay Rope.   W m 14%c       Hay Rope.   W m 15%c	Carpet dis 75 % 5 1 15 to and over 5 % 5 % 5 1 15 to and over 5 % 5 % 5 % 5 % 6 % 6 % 6 % 6 % 6 % 6 %
Wrought Table and Back Flapsdis 30&10 \$     Blind Butta, Parker dis 55&10 \$	Mrs. Coles			Hair weight American Iron
	Knox, with 4-inch Rolls	Retties.  Brass.  # 5 45c net Entireled.  Knives.  Knives.  dis 30 4  Knives.  dis 30 4	S'andard Rule Co.'s Boxwood die co.	American Flash and Cap Codia 30 %
Sey mour   dis 30-610 g	0. K 9 00 each net 0. K 6 50 each net 0. K 6 50 each net 0. K 7 6 50 each net 0. K 7 6 50 each net 0. K 7 6 6 50 each net			Eday's. dis 20 \$  Tea Trays. dis 20 \$  American Tea Tray Co. dis 15 \$  Thermometers. dis 50 \$10 \$  Tho Case. dis 50 \$10 \$
Clark's, Nos. 1, 8 and 5	Diamond	Knives. dis 25 g Knobs. carriage dis 60±10 g Base—Common. net	From 1 to 10 lbs. F b 3 % @ 4c net Sad Iron Nickei Stand attached. F b 5c Self-Heating Tailors per doz 29 35 net Sand Paper. (Fig. 60 to 10 4 4 2 5 net	Tin Case
"Garretson, No.   dis 50&10 \$  "No. 2 and 5 dis 50&10 \$  "No. 2 and 5 dis 60&15 \$  "No. 2 dis 60&10 \$  The American Spiral spring but Co. dis 80 \$2 \$  Standard. dis 50&10 \$  The American Spiral spring but Co. dis 80 \$2 \$  Standard. dis 50&5 \$1 \$  Double Waterproof, 1-4s, \$1.45 : 1-10s, \$2.25 \$2.50 \$	" No. 2.5-inch Roll 600 each net K. F. M. 45-inch Roll 500 each dis 15.5  G-inch Roll 600 each dis 15.5  Myers Fashfor Fluter 45 inch Roll 600 each dis 15.5	# Elastic End, No. 8	Sand Paper   Beader & Ausmson's (Flint) (0 to 1)4, 34 25 \(\pi\) ream	Tobacco Cutters.
Colt's	** Convex Brass Fluter, Sad Iron attachment\$1"75	" Por doz 750)	H. B. & M. Roman Filint	P. S. & W

New York wh	1
Carpet Sweepers.         each \$2 75 net           Union.         each 2 75 net           Welcome         each 2 75 net           Curridges.         Metallic.         dis 50&10 8           Caras.         Horse and Curry         dis 30&10 8           Curridges.         dis 10&10 8           Ward.         dis 16&10 8	DFGC
Curpet Siretchers.   ner doz \$2 00; dis 40.85	HP B#N
Chattle Lenders new list dis 602-l's t Chattle Engiss Coll. 22 94 94 75 75 74c  Trace, 615-10-2. by the cask, # pair gold 57c Trace, i-10-2. by the cask, # pair gold 57c Trace, i-10-3. dis 25 German Coll. d	ZSI#N Ti
German Halter Chain	M W
Chalk	Sa Re Ha
White Orayons	HI MI CH YOU YOU W
Spear & Jackson's   \$5'00 to £ gold   Clamps   Cabinet   dis 60&10 \$ Judd's   dis 40&10 \$ Lambert   dis 20 \$ Judd's   dis 40&10 \$ Lambert   dis 20 \$ Judd's   dis 20 \$ Jud's   dis 20 \$ Jud's   dis 20 \$ Jud's	To Pr
Sewholidia   September   Sep	FI Li: Co Sa Hi:
Japanned	W Br Hi
Cuckeves 1½ in, 29c; 1½ in, 32c; 1½ in, 35c, aet Cecks.  Brass Racking dis 25 g Lock and Globe dis 25 g Lever Bibbs dis 25 g Coffee Mills.  Board and Box. dis 15 62 20 g	So FI At Pa
Cocker'es	Be No
Peck Stow & Wilcox         die 25 g           Coopers* Tools.         dis 15 @ 20 g           Bradley 's.         dis 15 @ 20 g           Chas. E. Little         dis 20 g           Swan & Brombacher         dis 16 @ 20 g           Corkscrews         dis 20 g	Fit Ho An Sai Ne
Corn Knives and Cutters.  Bradley's	Huse
Bradley's	Ne Ne Ve
Cuttery, American Table 5 Meriden { New list Jan. 75, dis 25 \$ American Pocket { Cutlery Co}	Sin
Am. Pocket—Humason & Beckley Mfg. Codls 20&10 \$  Dispers. Britannia per doz 750—dis 20 \$; by bbl. als 33 \$ \$  Occoa, Plain per doz 3*5—dis 20 \$;  Rimmed per doz 3*5—dis 20 \$  Log Collars. Embossed Gilt dis 20 \$  Leather dis 20 \$  Brass dis 20 \$  Brass	Eles S J.J
Leather	Unscri
No. 3 mentalin   per doz   200   10   No. 3 mail   per doz   200   10   No. 3 mail   per doz   200   10   10   10   10   10   10   1	Ro Wr Pro
Bradies	Ser Ser Ser
Adjustable Handle	Sol Soc Riv
Rigg   Beaters.   8 in.   10 in.	Pia S S Lai Bir Cor
Peerless	Bei Bei Bei Clo Hai Wa
Brass Thread. dis 60&10 % Wood dis 25 %	Har Cel Wr Wir Gra Wh
Faucets	Am
Nichoison	Bul Glo Nat P Nat P Net
Butcher's Spencer & Co.'s "Diamond" 5 25 to & gold Spear & Jackson's 5 00 to & gold Jowitt's 25 to & gold W. K. & C. Peace's "Imperial" 5 25 to & gold R. Ibbotson 5 00 to & gold R. Ib	Per Put Vul Star Put Au
Goodlad's Moss & Ga 10le . 5 25 4 5 5 0 5 20ld Moss & Ga 10le . 5 25 4 5 5 0 5 20ld Thos. Turner & Co. (Peter A. Frasse & Co.) 5 00 to £ 20ld Thos. Turner & Co. (Peter A. Frasse & Co.) 5 00 to £ 20ld . Phillo Sheffield, "P. T. Co 5 00 to £ 20ld Limet & Co. (French)	Vul Vul Bur R. I
Knox, with 4-inch itelis	Bra Enl
O. K. 650 each net Peerless, 4-luch bloils 4 00 each net Peerless, 4-luch bloils 4 00 each net Excelsion, No. 1. 4 75 each net No. 2. 650 each net Diamond 750 each net Climax 7-luch Boils 9 00 each net 4 6 50 each net Empire 4 00 each net	Hav
Climax 7-luch Rolls	Car Bas

	lotesale Prices	,
net net	Domestic Fluter. \$1.75 each net Fairy, Self-Heater Oceach net Geneva Hand Fluter \$1.500 per doz net	
10 9 10 9 10 9	Champion, 6 inch rolls. \$4 00 each dis 10 4 inch rolls. \$5 00 each dis 10 5 Fluting Scissors. dis 25&10 9	
&5 g	"Empire" (W. P. Kellogg & Co.)	
10 9 10 9 31/4 9	Fry Pans. Burnished, P. S. & W., new list dis 45 g	
7%0	Tiff: & Howard dia 20 \$	
25 % 25 % 25 % 18c 55 %	Ganges. Marking dis 45&10 5 Wire. dis 10 5	- 1
net net	Nail and Spike	
net net		
10 % 10 % 10 % 10 % 10 %	Hammers, Emmet Hammer Co.'s Handled	
60 % 10 % 50 %	Hammers.   dis 25 %   Emmet Hammer Co.'s Handled.   dis 25 %   Emmet Hammer Co.'s Handled.   dis 35 km est Humason & Beckley Mfg. Co.   dis 35 km est Humason & Beckley Mfg. Co.   dis 6 % 50 %   dis 6 % 7 %   Chency's   new list.   dis 5 % 7 %   Chency's   dis 12 % 5 %   dis 26 km est Humason & dis 12 % %   dis 26 km est Humason & dis 12 % %   dis 26 km est Humason & dis 12 % %   dis 26 km est Humason & dis 12 % %   dis 26 km est Humason & dis 12 % %   di	
rold rold rold	Tower's Hand Cuffs, \$4 () per pair	
10 % 20 % 10 %	Provincence Tool Co.'s Hand Cuffs , \$15 per doz { dis 10 % Leg Irons 25 dis 10 % Handles.	
30 % 50 % k5 %	Handles.   Gis Glob 10	
2 00 25 %	Saw and Plane	
doz	Woodworth Axe, Fick and Stedge.  Brad Awl	1
10 % net	Socket	
25 % 25 % 25 % 20 %	Auger. 6 \$1 - dis 20\$2.10 \$ Pate it Auger, Ives'. dis 25\$2.10 \$ Douglass' per set \$1.25 - dis 10 \$ Douglass' per set \$1.25 - dis 10 \$ Douglass' per set \$1.00 - dis 10 \$ District to the control of the c	1
15 % 30 % 15 % 15 %	Hangers.  Barn 1900:  "Anti-Friction" (Rider, Wooster & Co.). dis 30 %  Novelty. dis 30 %  Hanges Snaps. dis 25 % 10 %  Henshaw S. dis 45 %  dis 40 %	1
10 % 15 %	Harmess Snaps. dis 25ec10 5 Hunshaw's. dis 40 5 Hunshaw's. dis 40 5 Fitch s. (Bristo); dis 50 5 Hotchkins' dis 10 5 Andrew' dis 25 5 Sargent's. dis 20620 5 Sargent's. dis 20620 5	1
25 % 20 % 25 % 20 %	Hotchkiss	1
25 % 10 %	Lathing. " 128 9 doz 7 50 8 00 8 50	100
net 6c 3%c	Claw, 123	9
10 % 15 % 20 %	Shingling, Nos. 12 8	•
10 % 15 % 40 %	Rurd's   Class   Proceedings   Class	1
25 % 25 % 10 %	Shingling, Nos. 0128 W doz #7 50 5 00 8 00 9 00	-
N X N X N X N X N X N X N X N X N X N X	456 9 doz 14 00 16 00 18 00	A
10 % 10 %	T8. \$\psi\$ doz \$\frac{1}{2}\$ 0.00 \$\frac{12}{2}\$ 0.00 \$\frac{1}{2}\$	Den (10) (10) (mg)
55 % 1 00 10 £	Elephant	
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05	Rolled Platedis 65&10 %	HIL
0 % % % % % % % % % % % % % % % % % % %	Raised   Gis Scale   Gis Sca	20 00 00
net 0 % 5 %	Heavy Welded Hook	FJ EJ
0%	Por dor pairs 2018 705 1025 dia 63&10&10 5	J
10 % 10 % 15 %	Roes   P doz \$8 00—dis 30 5 Socket   P doz \$8 00—dis 30 5 Socket   P doz \$9 00—dis 30 5 Riveted Eye   P doz 5 00—dis 30 5 Grub   Doz 5 00—dis 30	I
00 % 6-00 8 00 8 00 8 00	Scovill Pattern	C
0 % 8c 5c		ES
0 % 5 % 5 %	Bird Cage	S
eka U%	Wardrobe, Hat and Coat, Celling. Wrought Staples and Hooks and Staples dis 30\\( \delta \text{\left} \) dis 30\( \delta	C
0%	Wire Screw Hooks and Eyes         dia 65&106.10 ×           Grass         dia 2 / ×           Whittheree—Patent         dis 50 ×           Hooks and Eyes—Malleable Iron         dis 500×106.10 ×           Brass         dis 500×106.10 ×	M
0%	Horse Nails. Nos. 5 6 7 8 9 10	EGLIH
0 % 5 % let	American Pressed \( \psi \) \( \begin{align*}{cccccccccccccccccccccccccccccccccccc	CTS
et et old	National, Pointed and Polished, Pat. Fin " 28c 25c 23c 24c 21c 20c National, Pointed and Polished, Ex. Fin " 30c 27c 25c 24c 23c 23c	Lic
old old old old	Western	B
old old old old old	Pultan	M
old old old	Putnam.         2000 lbs., dis 5 g           Ausable.         Am. Pressed, Perkins.           Globe.         1000 lbs., dis 5 g           National and New London.         1000 lbs., dis 5 g           Vulcan.         1000 lbs., dis 5 g           Vulcan.         1000 lbs., dis 5 g           Vulcan.         1000 lbs., dis 5 g           Horse Shoes.         500 lbs., dis 5 g           Horse Shoes.         500 lbs., dis 5 g	M
old old old old old	Burden	U
o s	Braise Ruffieled dis 30 5  K. mir Vess.  dis 20 c	H S
net net net net	"Bread " \$\psi\$ dos \$1*50-dis 15 \$\frac{1}{8}\$ Hav and Straw, "Wadsworth's" dis 20 \$\frac{1}{8}\$ Lothrop's Cocoa Handie Lap Bolster Butcher Knives dis 25 \$\frac{1}{8}\$	Figure
net net net	Report   R	B
tet 5 %	Door, Mineral	

-		
1 1 8 1	I,adles,	Com
6 6	Lanterns.   No. 0, \$12.50-dis 15 5	Sa Ciari Ferg
		Norw Walk Sa
	Draw Cut, 14 Inch.	Miles Stow Draw
	Linen Fish	Sa
	Mason's   dis 20 %	John Am.
-	Trunk new list die 25 c Langstroth & Crane, Round Key dis 40 g Flat Key dis 384 g Barnes & Deitz	Ins All Dissa
	Costinental	Livin
	Yale Lock Co. dis 40 g Sargent & Greenleaf dis 20 g Trenton dis 20 g Branford	H. W Oth Wm.
	Norwich Russell & Erwin Nashua, Rev'd list of Jan. "75 dis 45&5 g.	Wm.
	Nashna. dis 656.5 \$.  Mallory, Wheeler & Co. 2 \$ extra for eash.  P. & F. Corbin.  Parker & Whipple.  Jacobus & Nimlek Mfg. Co.	Whee Stilin
	P. & F. Corbin.  Jacobus & Nimick Mfg. Co.  Padlocks, Russell & Frwin.  Mallory, Wheeler & Co.  "" Wm. Wilcox & Co.  "" Vulcan Hardware Co.  "" Vulcan Hardware Co.  "" J. H. Mc Williams.  "" dis 25  "" Seandinavian Jali.  "" Barnee & Deltz.  "" Barnee & Deltz.  "" Barnee &	Aiker
	Vulcan Hardware Co   dis 30 5   New York Lock Co   dis 30 5   J. H. Mc Williams   dis 5 7   Scandinavian Jail   dis 10 7	Nash' Bemi Hotel Comn Leach
-	Maliets.	Hater
	Meat Catters	Brow Fairb Howe
	Perry's (P. S. & W.)Nos. 200 \$80°00 \$40 00—dis 20 \$ \[ \frac{1}{2} \text{W odraff's (P. S. & W.)Nos. 100} \]  Woodraff's (P. S. & W.)Nos. 100 150	Shatti Chati Eurel Unive
-	Halea'. Nos. 11 12 13  Draw Cut. Pd dox. \$27.00 \$35.00 -43s 10 \$5  Draw Cut. \$27.00 \$35.00 \$42.00 -dis 25 \$5  Each \$860.00 \$40.00 \$45.00 -dis 20 \$5	Scale No. No.
	No	Foot.
1	Moiasses Gates   dis 65&10 5   Stebbins   dis 65&10 5   Stebbins   dis 90&10 \$   \$   \$   \$   \$   \$   \$   \$   \$   \$	Ship- Scr Amer Flat
	Lincoln's	Rou Flat Rou Rou
	Natis. See Trade Roport Nuts and Washers. large, &c : small, &c off list. Washers. large, &c : small, the off list.	Coa Coa Bed
	Ollows	Japan
	Miller's Zinc, Brass and Copper	Englis Neti Biru Bench
	Prior's Patent or "Paragon"         dis 30&10 \$           Ox Shoes.         \$ \$ 10c net           Ox Balls         dis 60&10 \$	Hand.
	Pencils Pencils Carpenters'net "Round Gilt. # gross \$6 @ net	Blood
	Dixon's Lead. P gross \$4.60 net Lumber. P gross 9.00 net Picture Nails and Knobs. Brass Head. dis 60&10 \$	64 66 66
	Pencils Faber's Carpenters'net Faber's Carpenters'net Bross \$6 00 net Dixon's Lead	Scythe
	Planes. First Quality	Cast S Cast I Seymo
	Plane Irons, Butcher's\$5 50 to 2 gold—new list  Auburn Tool Co.'s	Prunii Sine Sliding
	Planes. **  Pirst Quality. dis 55   Second Quality. dis 55   Second Quality dis 55   Second Quality. dis 55   Second Quality. dis 50   Selicy s Patent Adjustable dis 26   Selicy s Patent Adjustable dis 26   Selicy s Plane Irons, Butcher's. Selicy s Good-new list dis 26   Greenfield Tool Co. dis 26   Greenfield Tool Co. dis 10   Selicy s Good-new list dis 26   Selicy s Good-new li	Citates
	Balley's dis 20&10 % Plow Bits, Greenfield Tool Co. dis 10 % Pliers and Appers. Button's Patent. dis 284 %	Shiding Sho Ames Birmin
	Pilers and Nippers. Button's Patent. dis 33/4 % Hull's Patent Nippers. dis 38/4 % Hull's Patent Wire Cutters. per doz 36 59—dis 15 % Plumbs and Leyels Chapin's. dis 66/46/10 %	Rowia Old Co Miadle C. E Dunni
	Planbs and Leyels   dis 66:g&10 g  Chapin's   dis 66:g&10 g  Chapin's   dis 60:g&10 g  Standard Rule Co.'s New Adjustable   dis 60:e10 s  Standard Rule Co.'s Non-Adjustable   dis 60:e10 s  Standey R. & L. Co.'s Pat. Adjustable   dis 60:e10 s  Stanley R. & L. Co.'s Pat. Adjustable   dis 60:e10 s  Cocket Levels   dis 50:e10 s  Good 10 s  Cocket Levels   dis 60:e10	Sho Iron a
	Pocket Levels	Polish Barney
	Onnson's Farceix Adjustable	Floren
1	Pumps. Douglas Clatern, etc	Peck d
	6 ft No 9 with 12 ft nine	Slat Square Less Spol
	6 ft. No. 1, with 12 ft. pipe	Wood. Bailey
1100	Punches. Belt or Drive.  per doz \$1.50 net spring.  per doz \$7.00—dis 30&10 %  Rail.  Storm Program Page 25.00—dis 30&10 %	By the Britania Rogers Derby Holme
,	Barn Door, %, % and % inch	Holme Nickel Germa Tinned
1	\$8 00 9 00 10 00 11 00	Teas. Table
1	9 11 18 15 teeth.	Hindos Sand S
S. S. See al.	Magor Straps   dis 25&10 g	Washii Arkani
- OZ	dis 10   10   10   10   10   10   10   10	Grinds Stov Gem Joseph
		Gold M Squa
	Rollers	Iron Nickel Try Sq Star Tr Disstor
2		Taci Full W
200 144	Hay Rope # 5 154c	Carpet Brads / Finishi
•	Hay Rope. % and 5-16 inch w m 13 ° c  Rules. w m 12%c  Rules. dis 66% a 10 %	Trunk  W m.  Copper  Iron S
D 00 mm	Hubbard & Curtiss Mfg. Co	Double Tap
-	8's and ard Bule Co.'s Boxwood. dis 70 \$ dis 70 \$ 1 vory. dis 50 \$ Sad Irens. From 4 to 0 lbs. F B 3 % @ 4c net	Tea Americ The
1 20.72	"Tailors' per doz 22 25 net	Toe
2	2.2% & 3.4 75	Enterp

-	
0 9	Sash Cord. Common # 5 20 @ 72c. nes
0 9	to at the second
5 % 0 % 0 % 0 % 0 %	Snsh Locks.   P B 00c
0 %	Sash Weights.—Solid Eyes
0 %	Miles
0 % 5 % 0 %	Saw Rods
et	Shaw Rods
5%	Ferforated Cross Cuts, all kinds. 66€ € foot Inserted Tooth dis 10 g All else. dis 12 g
NA NA NA	Dission's Circular
ANNA	Livingston's Framed Wood. dis 10 c Livingston's But, her and Kitchen. dis 10 c
N. W. C.	Other kinds
75	Wm. McNeice's Patent Pole Pruning Sawdbs 10 2 Compass Sawnet k. M. Boynton's Lightningdis 40 % for immediate cash
h.	wm. McNiece's hand, cross Cut and Cir- cular
75.	Naw Sets.   Pross-ut.   Als Signary
	" Genuine. # doz \$15*00—dis 25 Hart's Patent dis 25 Nash's. dis 20\$10
KKKKKKK	Bernis & Call's
1 1 1 1	Scales. Haton, Counter
18	Scales
1	Howe's die 156 5 Shattuck's Counter and Union die 15 5 Chatillon's Grocers' die 25 5
×	Universal Family dis 25 g Scale Beams, dis 25 g No. 1 800 to 1500 the
15	Universal Family  dis 20 g  Scale Beams
% % 00	PPT GOZ \$\forall 25. \text{dis 10} \cdot \\   PPT GOZ \$\forall 25. \text{dis 10} \cdot \\   PPT GOZ \$\forall 25. \text{dis 10} \cdot \\   PPT GOZ \$\forall 25. \text{dis 60} \cdot \cdot \cdot \text{dis 60} \cdot \cd
	Ship—Providence Tool Co
MMMM	Flat Head Iron
et	Round Head Brass days Round Head Silver Capped, List March 1dis 25 s Hand Rail. dis 25 s Coash or 1 s
it.	Ship—Providence Tool Co. dis 10 g  Screws. American list of Jan. 1, 1874, Flat Head Iron. dis 52% g  Round Head Iron. dis 50% g  Round Head Brass. dis 82% g  Round Head Shiver Capped, List March 1. dis 35% g  Round Head Shiver Capped, List March 1. dis 35% g  Round Head Shiver Capped, List March 1. dis 35% g  Round Head Shiver Capped, List March 1. dis 35% g  Round Head Shiver Capped, List March 1. dis 35% g  Round Head Shiver Capped, List March 2. dis 35% g  Round Head Shiver Capped, List March 3. dis 25% g  Round Head, List Jan. 18, 1875. dis 28% g  Machine—Flat Head, Bron. dis 35% g  Round Head St  Round Head Bron. dis 35% g  Round Head Round He
%	Machine—Flat Head, Iron, List Jan. 12, 1875
WHEN W	English, Flat Head, Iron-Nettiefold & Chamberlain's dis 52%&10&5 S Birmingham Se'w Co. (A. Field & Co.) dis 52%&10&5 S
*	Brass
st %	Hand   dis 25\(\delta\$ 10 \le   Jack — Bell Bottom   dis 15 \(\le   Scythes \).
et et	
%	** Cast **
1 34 M W	" Silver Clipper
%	Whenes
2 2 2 2	Cast Steel.   dis 70±10 5
% it	Sheaves
% R 24	Iow list.   dis 25     Russell's Anti-Friction   dis 50     Sliding Shutter   dis 50 & 10 & 10 & 10 & 10 & 10 & 10 & 10 &
%	Shovels and Spades. Ames Birmingham Shovei Co
* *	Old Colony. new list uis 10&5 c Middleboro' Shovel Co. new list dis 12% 5 C. E. Jenningw. dis 12 w 5 c
***	Dunning's Shovels and Scoops
* *	Shovels and Spades
XXX	Barney & Berry's N. Y. Club.
XXX	Rink
N. S. N.	Polished Steel
16 16	Smake Shawas
t	Wood.   dis 35% to 5
2 %	Spoons
200	Bogers & Bro. A 1
6	German Silver
6	Tables. 275 net  Stocks and Dies
	Nione.
	Washita Stone. No. i, W 75 22c net  No. 2, W 75 17c net  No. 1, W 75 45c net  Arkansas Stone. No. 1, W 75 45c net
	Grindstones, Family, J. F. Green & Bro
	Joseph Dixon's
	Steel
	Grindstones, Family, J. F. Green & Bro
1000	Tacks.   Improved   dis 20 5
2000	
200	# B
-	Half Weight American Iron. dia 72% & 7% & Carpet. dis 70% & Carpet. dis 50% 7% % I dis 50% 7% % I lik in and over \$\frac{1}{2} \frac{1}{2}
	Tapes, Measuring.  dis 30 %  Edgy's
- 1	American Too Tree Co
1	Thermometers.  In Case. dis 50&10 5  Too Calks. P B Benet  Tobacca Cutters.
	Tobacca Cutters.   Tobacca Cutters.  Enterprise Mrg. Co. (Champion). dis 20 5 Morse's.   F doz \$12:00-dis 106:11 5 Wood Bottom.   Per doz \$12:00-dis 26:10 5 All fron.   Tangra' Tools and Machines.   Itangra' Tools and Machines.
	All fron per dox \$1050 dis 252 to \$  Tinners' Tools and Machines. list net

Per de Pe

March 4, 1875.	T	HE IRON AG.
Traps. Newhousedis 30 %	Pianished Oval Chafing Dishes, Low Covers. Inch	American Cast Steel.
Peck, Stow & Wilcox	Plantshed Uval Channg Dishes, Low Covers.   10ch 10   12   14   16   18   20   20   20   20   20   20   20   2	Spring
Traps.   dis 20 s	Planished Imperial Dish Covers. Inch	Machinery (round and square) 10 @ File. Sheet. 14 @
Cage, # doz 2 50, dis 10 % Troweis. Lothrop's Brick and Plastering. dis 10 % Disaton's Plastering. dis 12% &	Planished Imperial Dish Covers. Inch	Tool
Trovels.	Planished Oval Melon Molds.  Nos	Tool
Volume   Spice and Plastering   Gls 20 %	Sach	Tooi   \$ 320 G
Uses, Solid Box.	Planished Round Uses	Ragion Steel.—payable in gold, dis 5 % cash.  Rest Cast. P b 18  Kxtra Cast 19  Round Machinery Cast 19
### to 160 lbs	Planished Round Oyster Dishes, (Complete)Nos. 1 2  Kach \$2:10 2:80	Oun or Homogeneous   160
S9 to 160 lbs.   18c	Planished Oyster Dish Plates.   Nos. 1   2   2   30   3   3   3   3   3   3   3   3	" 3d quality " 16 German Steel, Best. " 11 de 2d quality. " 16
Sargent's discounting of the state of the same of the		Sheet Cast Steel, 1st quality "18" 2d quality "18" 3d quality "18" File Steel, Flat and & Round "18"
Trenton Paraliel	Stow & Patent Hollow Tea Pot Handles.   No. 1, Small 45 inches.   per gross, \$11.50   No. 2, Medium, 53   12.50   12.50   12.50	" Square and Round " 18 Mill " 18 Taper to 4 inch. " 1
## 10 160   Bs.   16c     160 and over   18c     160 and over   18c     Peter Wright's   18c     Pis Solid dox   18c     Silon   18c     Silon	Tea Pot Handles-P. S. & W. dis 20 s.  Stow a Patent Hollow Tea Pot Handles.  No. 1. Small 45 inches. per gross, \$11:50  No. 2. Medium, 53 "12:50  No. 3. Large, 65, "12:50  No. 4. Ex. Large 75 in., for Wash Pitchers & Solid Front Tin Tipped.  No. 10, Small, 45 inches. per gross, \$9:00	SPELTER—DUTY: In Pigs, Bars and Pintes, \$\) per 100 lbs.—less 10 per cent. \$\) \$\) \$\) \$\) \$\) \$\) \$\) \$\) \$\) \$\)
Canal (Pugsley & Chapman)new list dis 10 % Coal, Garden and Stone (Pugsley & Chapman)dis 25 Well Wheels.	No. 15, Medium, 55, 950 No. 20, Large, 65, 1075 Stow's Patent Hollow Tea Pot Handles, Adamantin	American "
Revised listdis 60&10 %	No. 4, Ext. Large 7½ in., for Wash Pitchers &cc. Solid iron. Tin Tipped. 18:00  No. 10, Small, 4½ inches. per gross, \$9:00  No. 15, Medium, 5½ 9:50  Ro. 20, Large. 6½ 10:10  No. 12, Bronzed and Tin-Tipped. per gross, \$13:50  aucespan Handless, Or Bess Maileavile Iron. P. B. & W. dis 20 %  No. 1, 5½ inches long. per gross, \$13:00  No. 1, 5½ inches long. per gross, \$2:00  No. 2, 6 10:10  No. 3, 6 54 14:00  No. 4, 6 14:4 4:52	Manufactures of, not enumerated, 35 per cent. ad Bars, Blockand Pigs, free. Bancs, subject to dutyo per cent.  Bancs. 35 25 6 26 c. s
Pras and Copper   dis 10 s	No. 1, 5½ inches long per gross, \$3:50 No. 2, 6 "375	per cent. # B 25 @ 26c., g Banca. # B 25 @ 26c., g Straits. # B 25 @ 26c., g English # B 21%c. g
Galvanized, Nos. 2 to 9	NO. 5, 95 NO. 5, 8 NO. 5, 8 NO. 5, 8 NO. 5, 8	CHARCOAL TIN PLATE.  I C 10x14, Prime Charcoal
Gaivanized, Nos. 10 to 18. market list dis 10 & 15 st Tinned dis 26 st 90 st Cast Steel dis 15 st 20 st 90 st Cast Steel dis 15 st 20 st Tinned Broom Wire dis 16 st 20 st Gaivanized Telegraph, Nos. 16 and 11 st 10 de 10 st Gaivanized Telegraph, Nos. 10 and 11 st 10 de 10 st Gaivanized Telegraph, Nos. 10 and 11 st 10 de 10 st Gaivanized Telegraph, Nos. 10 and 11 st 10 de 10 st Gaivanized Telegraph, Nos. 10 and 11 st 10 de 10 st Gaivanized Telegraph, Nos. 10 and 11 st 10 st 60 st 60 st Gaivanized Telegraph, Nos. 10 and 11 st 10 st 60	No. 1, 5½ laches long per gross, \$2:50 No. 2, 6 No. 3, 6 No. 3, 6 No. 4, 7 No. 5, 8 No. 5, 8 No. 5, 8 No. 6, 9	14x20, " 1 X 10x14, " 12x14, " 14x20, " 14x20, " 1 X 10x14, " 1 X 10x1
Annealed Fence. Nos. 8 and 9	No. 5, 8 4 5 25 No. 5, 8 4 5 25	For each additional X add
Stule Steel Wire. \$7 00 to & gold Jud's Picture Wire. dis 50	Japanned.	Best 2d Quality   Ordina   I C 10x14   \$10°25 @ 10°75   9°55 % 10°00   9°25 @ 10°15   10°00   9°25 @ 1 C 14x30   10°50 @ 10°50   10°50   9°25 @ 1 C 14x30   10°50 @ 11°00   10°50   9°25 @ 10°50   1
American Adjustable         dis 45 %           Baxter's Adjustable         8"         dis 30 %           Diagonal         dis 30 %	Nos	Prime Char. 2ú qual. Coke
Coes   Genuine   dis 40&5 \$	Per gross pairs 8sc \$1:00 1:50 1:75 2:10 2:75 3:75 1:1)  Black. Nos	1 C 20x4821:00 @ 21:50
Lindsay's Patent dis 25 % Taft's Pattern dis 70 %  Davis ('atent Duplex new list dis 25 %  Remis & Call's Listent Combination new list dis 25 %	Nos. 6 Per gross pairs. 81.75 2.10 2.75  **Extra Heavy Tinned Actor, Ears-French Pattern.	X   4xx0
Judd's Picture Wire.   dis 50	Tinned Tea Kettle Ears.	Old Metals.
Wringers.         ₩ doz #64 00           Providence.         ₩ doz 61 00           Reliance.         ₩ doz 61 00	No. 30 Medium. \$\psi\$ b. Timed \$1c; \text{Alack}, 16c. No. 30 Medium. \$\psi\$ b. \$\psi\$ \text{Alack} : 16c. No. 30 Large. \$\psi\$ b. \$\psi\$ 20c. \$\psi\$ 16c. No. 40 Extra Large. \$\psi\$ b. \$\psi\$ 20c. \$\psi\$ 16c.	(Dealers' Selling Prices.)
Wringers.         # doz \$64 00           Protdenee.         # doz \$61 00           Reliance.         # doz 66 00           Universal—Extra         # doz 66 00           Noveity.         # doz 66 00           Sherman.         # doz 66 00           Eureka (Friction)         # doz 60 00	In cases of 100 lbs. each.  Milk Can or Boiler Handles—(P. S. & W.) 4½ indis 25 %  Pisin, Sc.; Japrid, 9c.; Tinned, 15c. per ib.; Maliesable Cilps or Ears to match, Tinned 2sc per ib.  Toliget Ware Hundles—4½, nches (P. S. & W.)	Heavy Composition
TIN WARE AND TRIMMINGS.	Tollet Ware Handles—1½ nches (P. S. & W.) dis 35 % Plain with drilled holes, per 1b 8c Plain with Cast	Tea lead. Wrought iron 1½ @ Sheet Iron 0% (6
STAMPED TIN WARE, dis 5 %.	Plain with Cast         8c           Plumbers' Scrupers—(P. S. & W)         dis 25 %           Extra quality, length 6 in., per doz         \$1 € W	Old lead, solid.   6   60   1   1   1   1   1   1   1   1   1
COMNON STAMPED WARE, &C. Bucket Covers. Quarts	METALS.	
COMMON STAMPRO WARE, &C.  Bucket Covers.  Inch. 45 53-16 65-16 65 71-1-16  Per gross. \$2.00 2*60 3*40 4*25 5*75  Quarts. 6 8 10 12  Inch. 88 9 94 95 10-9-16  Per gross. \$4650 8*00 8*30 11*50  Cake Box Covers.  Small, Medium, Large.	IRONDUTY Bars, 1 to 14 cents per lb., Sheet, Band.	Paints, Oils, etc.
9	iRON.—DUTY Bars, 1 to 1½ cents per lb Sheet, Band, Boop and Scroil, 1½ to 1½ cents per lb. Provided, that none of the above Iron shall pay a less rate of duty than 35 per cent. Pig. \$7 per ton; Polished Sheets, 3 cents per lb Wrought Serap, \$8 per ton: Cast Serap, \$6 per con. Italiroad, 70 cents per 100 lbs. Boiler and Plate. 1½ cents per lb.	Black, lamp—Coach Paints.   Paints.
Smail   Medium Large   Inch   115   125   135	we per ton. Railroad, 70 cents per 100 los. Boiler and Plate. 1% cents per lb.	Black Paint. in oil
1150   1270   1350	Foundry No. 4	" Chinese, dry in oil
Inch.	Contract	" Van Dyke.  Carmine, 40
Per gross. 38 50 10 50 Inch. 9 10	Bar Iron. Am. Reased, at millnominal	Paris   good, 30c best,   in oil   good   30c best,   Mineral Paints   11/4 6
Plain 1½ 2 3 4 5 6 qts. Inch 8 3% 8% 4% 5	Ralis.   Welsh. gold.   Store   Welsh. gold.   Store   Welsh. gold.   Store   Welsh. gold.	ited Lead, American  "English
Per gross	Wrought Scrap 43 00 @ 35 00  Bar Iron from Store.  Common Iron.	indian, dry
Inch 7% 8 8% 9 9% 10 10% 11 11% Per gro. 86 00 6 55 6 75 7 75 7 950 10 00 12 00 12 00 Grater Plates.	\( \text{Y to 2 in. round and square} \) \( \psi \text{ ton } \\$ \( \psi \text{ ton } \) \( \psi \text{ ton } \text{ ton } \) \( \psi \text{ ton } \text{ ton } \text{ ton } \) \( \psi \text{ ton } \text{ ton } \text{ ton } \text{ ton } \) \( \psi \text{ ton } \text{ ton } \text{ ton } \text{ ton } \)	" Turst
Per gross	1 to 6 in. x % to 1 in.	" in oil
With Tubes. 10-50 14-00 No. Stamped Square Pans. 16-50	Bands	* English
Mills Sistemans (Main or Dispose)	Plow size	White Lead, Americal, pure dry in oil
Per gross	Ommon R. G. R. G.  American and English. American. English.  Nos. 10 to 30	" Vermont
Steamer Bottoms.  Add \$1 per gross, or 10c. per doz. to itst of Pot Covers.  Tin Stove Pipe Rings.	8 to 36	Zinc White, American No. 1 dry
Acch.	American and English American English	Linseed Raw
To Rivetper gross, \$0.80 1.10 To Solder	Patent Polished	Whale, Crude.  Bleached Winter.  Sperm, Crude.  Wipten unbleached
DEEP STAMPED AND RETINNED WARE, dis 25 % Plate Stamped Water Dippors, Per dox 9 pint. Pint. Quart. quarts. 2½ quarts. Per dox 90 115 150 180 180 180 180 180 180 180 180 180 18	One piece Corrugated Sheet from Elbows,	Seal, Extra Refined. Lard, Pure Winter.
Per doz 90 1-15 1-50 1-85 7-50 Retinned Milk Pans. Qts 4 1-14, 2 3 4 4 5 6 8 10 123 9 doz, 1-20 1-50 1-55 2-00 2-25 5-15 8-50 8-55 4-75 5-25 5-75	\$ 5 5 6 6 7 inch. \$2.50 2.50 4.50 5.25 6.50 per dox. \$1.50 5 6 7 inch. \$1.50 5 6 7 inch. \$1.50 7 00 9.50 12.00 14.00 per dox.	French (Paris) ii ol. ii ol. iii ol. ii ol.
Pints	COPPER -Dory . Pig, Bar and ingot, Sc. ; old copper,	Natural Lubricating
Pints% % 1 Quarts 1 2 24	water copper is a component of chief value) 45 % ad valorem.  American ingot	Block.
Pans. Hetianed Deep — Gasts	American Ingot. \$\Pi\$ 22 \(\pi\) 23/6 E3/6 English English \$\pi\) SHEATHING. SHAZIERS' COPPEE. BOLTS, &C. Braziers Copper, ordinary sizes, over 16 oz., per square foot. \$\pi\\$ Enziers' Copper, ordinary sizes, 16 oz. and over 12 oz., per square foot. \$\pi\\$ Pazziers' Copper. 10 oz. per square foot and lighter. 36c. \$\pi\\$ Pazziers' Copper. 10 oz. per square foot and lighter. 36c. \$\pi\\$ Circles less than 98 inch in diameter. \$\pi\\$ 0.00 \$\pi\\$ Expended to an all patterns of the composition of the compos	Flocks
JAPANNED TIN WARE, dis 5 %. Cannisters, Common Pound % 1 2 3 Fer gross \$10.50 15-00 24-00 30-00	12 os., per square foot	" Sheet. Glaziers' Points, Zinc. Gum, Copal.
Canlisters, Common Pound \$\frac{1}{5} \times \frac{1}{2} \times \frac{2}{3} \times \frac{2}{3} \times \frac{1}{3} \times \	Circles, 84 inch diameter and over	Shellac, English, dark.
Cake Boxes, Round	Bolt Copper	Punice Stone, selected Lumps
Square	No Copper is Sheataing except laxes nones, and not to exceed 34 or. to the square foot.  O'NELL'S PATENT PLANISHED COPPER.  14x46.	Asphaltum.  Jenzine
Oak A STORY OAK A	O'NEILL'S PATENT PLANISHED COPPER.  14 and 16 oz. and heavier	French Window-lst, 2a, 3a, and 4th qualities. ] box of 50 feet.
Per gross \$1500 1600 28 00 4200 Lunch Boxes, per doz	14 and 16 oz. and heavier3cc. By the case, 37c. # 15 (And all sizes not over 30 inches wide.)	SINGLE,  SIZES. I. 11, 111,  6 x 8 to 10 x 15, 910-93, 90-95, 90-95
Toy Banks, GothicNo. 1, \$400, No. 2, 400 per gross Toy Cups, StraightNo. 1, 2	12 02	6 x 8 to 10 x 15. \$10-25 \$9-25 \$5.75 \$1 1 x 14 to 16 x 24. \$12-00 \$11-00 \$10-00 \$18 x 22 to 20 x 30. \$15-00 \$13-50 \$12-00 \$10 \$15 x 36 to 24 x 50. \$17-50 \$15-25 \$12-50
Toy Cups, Figring	1948, less than case	26 x 28 to 24 x 36. 18 25 16 00 18 25 26 x 96 to 26 x 44. 20 00 18 00 14 50 26 x 46 to 30 x 50. 21 00 19 00 15 25 30 x 52 to 30 x 54. 22 50 20 25 16 25
Trunks. Wire Handled	LEAD—DUTY Pig \$3 per 100 lbs.; old Lead, 114 cent per lb.; Pipe and Sheet, 24 cents per lb.	6 x 8 to 10 x 15. \$10-25 \$89-25 \$10-75 \$1 x 14 to 16 x 24. \$12-00 \$11-00 \$10-00 \$15 \$18 x 22 to 20 x 30. \$15-00 \$15 x 00 \$12-00 \$10-00 \$15 x 22 to 20 x 30. \$15-00 \$13-50 \$12-00 \$10 \$15 x 36 to 24 x 30. \$17-50 \$15-25 \$12-50 \$15 x 36 to 24 x 30. \$17-50 \$15-25 \$12-50 \$12-25 \$12-20 \$15 x 36 to 24 x 30. \$18-25 \$16-00 \$18-25 \$16-20 \$10-25 \$16
Planished Coffee Pots, Round. Each	Spanish 6% 6 7c gold German Reaned 6% 6 6% gold English 6% 2c gold American	DOUBLE.  SIXES. 1. II. III. I
Plantished Coffee Pots, isound.  Each	Bar. die 10 5. 5% c gold Pipe. die 10 5. 5% c Tin Lined Pipe. dis 10 5. 163 c	6 x 8 to 10 x 15. \$16.50 \$15.00 \$14 00 \$19 11 x 14 to 16 x 24. 1925 17.75 16 90 15 18 x 22 to 20 x 30. 24.00 24.75 19.25 15 x 36 to 24 x 30. 25.00 24.50 20.00
Finalished Tea Pots, Oval.  Each	BARBITT METAL. 9 86 9c	26 x 28 to 24 x 36 25 25 25 27 3 27 26 26 x 28 to 24 x 36 to 25 x 44 32 00 20 00 28 25 25 26 x 46 to 30 x 54 t
Fints	14x48, by the case	6 x 8 to 10 x 15. #16°50 \$15°00 \$14 00 \$13 11 x 14 to 16 x 24. 19°25 17°75 16 00 15 15 x 26 to 20 x 30. 24°00 24°50 20°00 15 15 x 26 to 24 x 30. 25°00 24°50 20°00 26°00 20°00 26°00 20°00 26°00 20°00 26°00 20°00 26°00 20°00 26

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Copper Yellow metal	٠.														۰		٠.															20
Yellow metal																												14	1		(a	15
BEET SM																												м	¢ .		GW	1.4
Heavy Composi	t7	0	n															ì										17	1		200	186
Old lead, solid																												0	ì		GID	64
Tea lead																																5
Wrought iron														Ī														1	14	6	a	130
Sheet Iron																												0	14	2	600	-, 4
Cast Iron																												1	1		a	134
Machinery Iron.																												í	1 <sub>d</sub>	(	(00)	" /4
Zinc																												-8		٠.	6	530
Pewter, No. 1														ľ				ľ							ľ		1	12			-	-,4
" No. 2								ľ						•	- 1			•	•					•	•	•		i	ì		a	12
Speiter										•	•			۰	۰			۰	۰	•					۰	۰		-			600	6
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-										4	•	•										_	-									

Paints.	- 1
Black, lamp-Coach Painters P D	20e
ordinary	.6c
heat	100
Black Paint, in oilkegs, Sc.: asst'd cans, 11	200
Bine, Prassian, fair to best	75e
ti Chinese day	680
" Ultamafine.	83K
Brown, Spanish	160
" Van Dyke	.90
Carmine, 40	00
4 in oil	Car I
" Paris good, 30c; best,	10e
Min one Patrice of the one of the	15c
Orange Mineral	4C
Red Lead, American9	Ge I
English10	16C
venetian (N. C.) dry2	% C
" indian, dry	36C
Rose Pink	184
Sienna American, Raw	46
in oil.	350
** Raw **	25c
Umber, Burnt 4 @	8c
H DAW IN OIL16 @ 2	10
44 in oil	e e
Vermillion, Chinese	
English 1 79. go	la
American, Common	n.
White Load, Americal, pure dry	ile
White Pasts Finalist in Oil	le
Value Ochre, French	ac.
in oilasst'd cans, lic: kegs, 81	20
Vermontin casks 13	50 l
" Unrome	ie
10 00 2	
Zinc White, American No. 1 dry	96
Zine White, American No. 1 dry	9c 1c
Zinc White, American No. 1 dry.  1, in oil	9c 1c c
Zinc White, American No. 1 dry.  1, in oil.  French (Paris).  11  11  11  11  11  11  11  11  11	9c 1c c
Zanc White, American No. 1 dry	9c 1c c c
Zinc Waite, American No. 1 dry	9c 1c c c
Zinc Waite, American No. 1 dry.  "French (Paris)	9c 1c c c
w mile, Uritie	9c 1c c c o c
Zinc Waite, American No. 1 dry.  French (Paris)	9c 1c c c c
Zinc White, American No. 1 dry.  "French (Paris)	9c 1c c c c o o o o o
Zinc White, American No. 1 dry.  French (Paris)	9c 1c c c nc be
Zinc Waite, American No. 1 dry.  "French (Paris)	90 10 00 00 00 00 00 00 00 00 00 00 00 00
Zinc White, American No. 1 dry.  "French (Paris)	90 10 10 00 00 00 10 10 10 10 10
Zinc Waite, American No. 1 dry.  French (Paris)	90 10 00 00 00 00 18 10 00 00 00
Zinc White, American No. 1 dry.  "French (Paris)	90 10 00 00 00 00 10 10 10 10 10
Zinc White, American No. 1 dry.  "French (Paris)	90. 10 c c c c c c c c c c c c c c c c c c c
Winter subleached	18 10 00c 5c
Zinc Waite, Averican No. 1 dry  "French (Paris) in oil 17  Linseed Raw Uis Bolled 17  Holled Stewart Span Span Stewart Span Span Span Span Span Span Span Span	18 10 00c 5c

#### PRATT & CO.,

Hardware & Iron Merchants, Buffalo, N. Y.

Manufacturers of the Superior Brand,

#### BUFFALO FORGED HORSE NAILS.



Francis Axe Co.

Buffalo, N. Y.

Diamond Edge Silver Steel

AXES.



"George Washington"

HATCHETS.

Bench Axes, &c.

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Complete Drawing Cut, Patented Dec. 10, 1867. Challenge Augers and Auger Bits, Self Feeding B. S. Drills, Spoke Shaves, &c.

PRATT & CO., Note Washers, Crow Bars, Horse Nails, &c.

SHELTON CO.,
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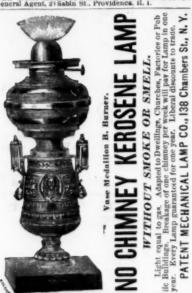
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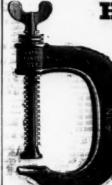
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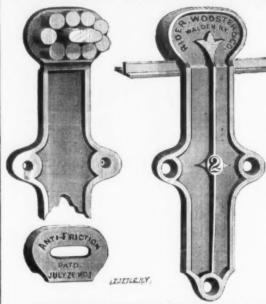
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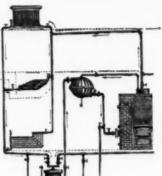
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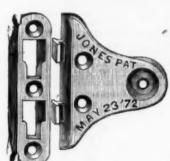
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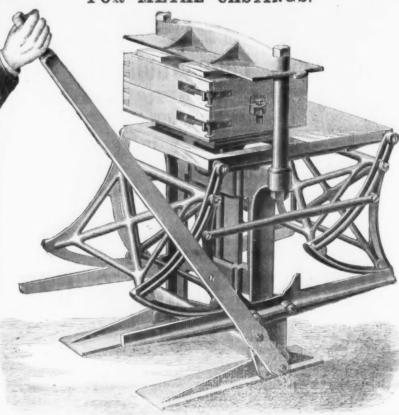
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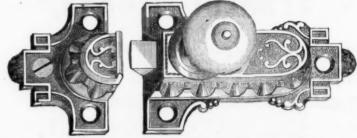
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Ausable	d Half. \$\frac{\pi}{\text{N}}\doz. nbd Half. \$\frac{\pi}{\text{N}}\doz. doz. \$\frac{\pi}{\text{N}}\doz.	108. 6 7 27 25	8 9 24 23 25 24
Brundage	Nos.	5 6 7	23 24 23 22 8 9 25 21
On Ausable. G	lobe and Brunds Mortise and Hi bination	age 1900 to 1 lin.	25 21 otsdi4 5
Makes in Com	, Mertise and Moination.  Straightful discount for the same of the	r cash 2 %	ew list dis 45
mineral and R	tches.—Rim ai xtra discount fo	nd Mortise.	dis 43
E	and		Of s 25
Till and Cupbe American Pad	locks		
Till and Cupbe American Pad Scandinavian	locks. Pad Locks. \$10-50 10-50 12-00 9 9% 10	12.00 15.00 10% 11	15:00 dis 15
Till and Cupbe American Pad Scandinavian † doz No	locks Pad Locks. \$10*50 10*50 12*00 9 9% 10 \$18*00 18*00 12 12%	12.00 15.00 10½ 11 22.00 18	15:00 dis 15 22:00 dis 15
Till and Cupbe American Pad Scandinavian	locks. Pad Locks. \$10°50 10°50 12°00 9 9 1/4 10\$18°00 18°00 12 12½ oggens Latches. quare Candle an	12·00 15·00 10½ 11 22·00 13	15:00 dis 15 11 dis 15 22:00 dis 15 13 dis 15dis 5 @ 10dis 5 @ 10dis 15
Till and Cupbo American Pad Seandinavian  † doz  Noo  Trunk Locks  Trunk and Ranterns  Goo for Oil.  Kernel Lanter in thecks  Western Patty Pennsylvania	Cocks	12:00 15:00 10½ 11 22:00 13	15:00 dis 15 1112 dis 15 22:00 dis 15 23:0 dis 15dis 5 @ 10dis 10dis 10

classes Gates. Enterprise Mfg. Co.'s Measuring Faucets

ders, Frary & Clark's Petroleum.

Auburn Tool Co., " Bench

r's. Philadelphia. Plumbs and Levels. -Adjustable..... Cast Steel Garden

-	The state of the s
	Shovets and Spades.
	Rowland's Plain Back, Jan. 23d. dis 25 d Back Strap "dis 25 d Oilver Ames & Sons
- 1	" Back Strap "dis 25 9
	Oliver Ames & Sonsnew list dis 12%
	Brady Snovel Co
10	Richmond (polished face) by the cask " 3%c ne
	Stone.—Arkanaga Oil No 1 2 % 5780 He
	Turkey Oil, No. 1. " 1.00
le	Stone.—Arkansas Oil, No. 1
e.	wasnite Extra
e	."
%	Mcrews-Iron new list, Jan. 1st, 1874, dis 52 4
	Brassdls 52% 1
et	Plateddis 40 9
et	Britannia dis 50 f
et	German Silver dig 30
15	German Silver
et	Lalance & Grosjean Iron dis 10 3
et	Springs.—Gray's Doordis 40 5
et	Torry's Door. dis 40 g
	Stove Polish,Gem. 30 gross, \$500
10	Stove Polish.—Gem. @ gross, \$5:00 Onyx. Try Squares.—Winterbottom. dis 10 @ 15 9
50	Try Squares, -Winterbottom dis 10 @ 15 9
90	Stanley Rule and Level Codis 45&10
100	Willis Thrail, No. 2. dis 38x10 Willis Thrail, No. 2. dis 30x10 Disston's No. 2. dis 40x Tracks, &c. — Haif Weight Tacks. dis 72x Clout and Finishing Nalls. 7x4 by the case. dis 72x4x7x Clout and Finishing Nalls. 7x4 by the case. dis 73x4x7x dis 7x5 dis
50	Tacks, &cHalf Weight Tacksdis 72 1/4
	Clause dis 72 1/4 7 1/4 9
8	Cloud and Finishing Natis
8	Traps.—Genuine Oneida—Newhouse listdis 20 9 Imitation
-	Imitation " " dis 30 a
%	Vises.—Solid Box. P in net 18: Wrenches.—Cos Genuine. dis 40 49: 55
%	Coes Imitation Wrought Bar
%	Malleghle Rev die 60
8	" Malleable Bar dis 60 ; (Kellogg) Malleable Bar dis 50 @ 10%
50	into rattern (wrought Bar) 65 9
%	Rellogg's (Nail Bar)
9%	
%	VV 1 PP NO. U to 18
%	
%	No. 27 to 36. dis 45 @ 47% 3 Coppered v to 12. dis 15 @ 20 dis 15 @ 20
%	Tinned Broom Wire.
10	Tinned Broom Wire
	, and an
8	
8	BUFFALO.
×	Reported by Messrs. Sidney Shepard & Co.

ancinitions:	0.0 YES	CHHYN.	19218	ney	Shepara	Œ
		Marc	h 1,	1875		

Reported by Messers, Sidney Shepard & Co.	i
24 4 4	١
Murch 1, 1875.	
Wrought Narrow. dis 30% 10 %  Broad, Loose John dis 30% 10 %  Table and Back Flaps dis 30% 10 %  Table 30% 10 %	
Wrought Butts, Loose Pin. dis 354:10 \$ Betting - Rubber . dis 30 6:65 \$ Leather, new list, oak tanned.	-
Blue	-
Charcoal 88:50 4:50 5:25 6:50 dis 10 g Russia 7:00 9:50 12:00 14:00 dis 10 g	
Fluters—Geneva Hand	
Clark's   dis 55&10 g   Shepard's and Standard   dis 55&10 g   Wrought Strap and T   dis 55&10 g   Shepard Standard   dis 55&10 g	
Hods. Coal—Plain Black and Galvanized.   dis 10 % Funnel, Black and Galvanized.   dis 10 % Fancy and Helmet.   dis 10 % Hooks and Staples—Wrought   dis 10 % Hooks and Staples—Wrought   dis 10 % Hooks—Belt   dis 90% 10 6 % 10	
Hooks-Belt	1
Lanterna "Petriess."No. 1 5 18 500:10 5	l
Tupujar \$26.00 \$10.50 \$13.75 dis 10 \$	١
Tunuiar   P   dos \$50 00 \$10 50 \$13 75 dis 10 \$	
Shoedis 7% %	I
American   dis 20 2   Nutls-Clout and Finishing   dis 70 5   Shoe.	
4 Clinton	l
Packing—Rubber	
Flat Head, Brass. dis 52½ 5 Spoons, Iron Tinned. dis 10 5 My the case	
Plated Rogers' A No. 1   dis 1 y     Britannia   dis 45&10     Britannia   dis 45&10     Squares—Steel and Iron   dis 45&10     Scales—Bullalo Scale Works   dis 25     Fairbanks   dis 15	
Dixon's   6'00	
Vises - Parallel, Buffalo   dis 25 g   Ware - French, Tinned and Iron   dis 25 g   Stauned and Japanned   dis 65 g   Cast Iron Hollow   dis 41 g	
12 50 20x28 C. " 99-58	
Pig Tin-Straits 28c @ 29c	1
"Lasalle"	
Sheets #11-25 From Wire—Bright and Annealed dis 45 2 Coppered dis 40 2	
Tinned	1

CINCINNATI.
Reported by Sellew & Co., Importers and Jobbers
Metals, No. 214, 216 and 218 Main street.
Tin Plate.—I. C. 10x14 Charcoal. \$11.50 @ 128   L. X. 10x14 Charcoal. L450 @ 128   L. C. Terne 14x20. 10.50 @ 128   L. C. Terne 25x28. 10.50 @ 128   L. C. Continuous. 21.50 @ 238   L. C. C. Continuous. 21.50 @ 238   L. C.
Pig P B 27c @ 29
Bars 10 10 31
solder
S. & Co 19 10 230
A 1 @ 9 19
Rooming P 17
Lead.—Pig # 1 7 %
Bar & b sk
Copper.— Ingot
Plantsnea
Sheathing
" 10 to 12 10 " @ 35
Braziers., 18 lb " @ 83
Zinc. Cass. 500 to 1000 10s
Case, 100 lbs
BrassRoll, No. 26 to 30 20 10 20
Roll, No. 30 to 38
Rioll, NO. 35 to 40
Wire, NO. U to du
" 20 to 25
Allens' 20
Market
Antimony # 5 17
Blanuth
Nickel @ 18 18 5
Sheet IronGen. Russia ® 20
Planished A. & 5 15
4 B 4 12%
Smooth Smoot
Com. B. Fin. S. L. U. D Re'fo
15 to 20
22 to 244'6c 5'6c 7'6
96
27

Gen. Russia, No. 1 stained...

Galvanized.....

1	
Galvanized IronFull	bundlesdis 20 %
Nos. 18 to 20	No. 2614c
22 to 24 13c	27130
Bar Steel Silver, W to 160	· Crescent 21c.
Iron Wire	
Enameled Ware	dia 45 @ 50 g
One Piece Corrugated	Walls and the state of the state of the state of
One Flece Corrugated	E100W8
Charcoar Iron.	Russia Iron.
4% Inch @ doz #2'30	4½ inch ₩ doz \$5.00
5 " " 8:50	9 100
51/2 " " 4:50	536 " 930
6 44 5.25	6 11 12 (0)
7 " 6.50	7 44 14.00
Leader Elbows, Flat C	rimp Retinned or Gal

PITTSBURGH.
The following are the Card rates of Lewis, Oliver & Phillips, H. B. Newhall, it Warren St., New York, Agent. Iron, standard list assorted sizes, for large orders, c.,
card rate, 2 % off net. Flat Rail (14x4), punched and coun'sunk. 4.4c & n net
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Norway Nail Rods
"Wedge" or "Pinch' point)
Beetle Rings
% round, bent to shape, 30c ? ft. of fence, less 15 % off net.
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Pat. Hot Pressed Square and Hexagon Nuts.
small sizes, from 3-16 to 34 in
Pat Hat Proposed Savana and Hawagan Vista

9 c & moff net

Wagon Brake Ratchets, each. Binished with guard, each. Wrought Hammer Straps, heavy pattern, each. Bight each....

DETROIT.

(Reported by Mossi	8 · Jewell & Root.)
PlateBest Charcoal	
0. 10x14     \$12 00       0. K, 10x14     14 75       0. 12x12     12 50	No. 2 1
X, 10x14 14 75	Theet Zinc.
X, 10x14 17 50	In any quantity 104
C. 12X12 12 50	Bright Wire.
K, 12x12 15 25	63 lbs. in bdldis 40
C, 14x20 18 00	Copper,-
X. 14x20 15 75	Sheathing316
X.14x20 18 50	Copper Bottoms82c
XX. 14x20 21 25	Planished Copper
XXX, 14x20 24 60	Sheathing, 14x483
M., 100 Plate 11 50	Boller Size, No. 7 4
X. " 14 25	" " No. 84
XX. " 17 00	" " No. 94
C. 100 Plate	Sheet Iron
XXXX 100 Plate 22 50	No. 18 Am. Com4
X. 14x14 24 (10)	No. 24 Am. Com4
C. 10x14 W 11 50	No. 26 Am. Com4
X. 10x14 W 14 25	Patent Planished Russ
offing Tin Best Char.	Nos. 24, 25 and 26,1
C, Terne, 14x20 \$11 00 X, " 14x20 18 75	Genuine Russia, No. 9, 1
X. " 14x20 13 75	11 and 121
C. Terne, 20x28 13 00	Broken bdis. %c. extra
X, " 20x28 28 00	W. D. WOOD'S & CO. S SHE
ke Tin	IBON

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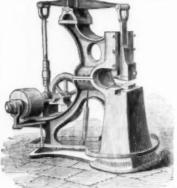
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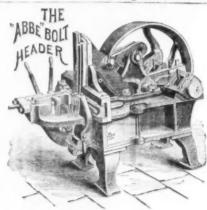
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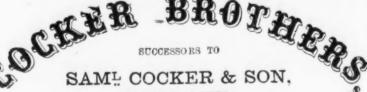
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10x14, 1C, Ch'l. Good. \$
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14x30, 1 X X .
10x14, 1 C, Ch'l. Good. \$
14x30, 1 X X .
14x30, 1 X X X X X .
14x3

10x14 IX. 4 14 50 12x12, IC. 4 12 50 12x12, IX. 4 15 00 14x20, IC. 4 13 0 Rooning IC, Charcoal, Be	DC, 100	Plate, "	. 1200
12x12, IC. " . 12 50	DX.	65	. 14 50
12x12, IX, " . 15 00	DXX.	**	. 1700
14x20, IC. " . 13:0	DXXX		. 19 50
Roofing IC, Charcoal, Be	26		11 50
20x28, IC, Charcoal Room 20x28, IC, 20x28, IC, 20x28, IX, 10x14, IC, Coke Plates	Fair.		22 5
20x28, IC. 44	Best .		23 (K
20-20 IX	0.9		27 54
10rt4 1C Coke Plates			00 @ 16 %
14=90 TC		10	M) @ 11 a
10-90 10			17 %
TOLAN, IV.			
20x28, IX, 20x28, IX, 10x14, IC, Coke Plates 14x20, IC, 10x20, IC, Block Tin.— Large Pigs	1 Bars		99/
Block Tin.— Large Pigs	Stratte	2c blother	
Small Who so 1000 lb	Caske	to miguer	1018/
Loose Sheets	Casa.		
Slab Zinc or Spelter			10c to 71ce
Copper.—Bottoms			A 20 176
Sheathing			· · · · · OCH
sheathing			000000000000000000000000000000000000000
Planished			*** * * * * * * * * * * * * * * * * * *
" Boiler lengths.			4U
Ingot			24C to 266
Bolt			300
Braziers' Sheets.	1 00-00	× + - +00 11	
30x60, 6 to 8 lbs w to 88c 30x60, 10 & 12 lbs " 35c	BUX GU.	12 to 100 tpm	# TO 324
30X90, 10 00 12 100			
Solder -F. S. & Co.'s mak	P.		
SolderF. S. & Co.'s mak	P.		23
Solder.—F. S. & Co.'s mak Best Fine	P.		200
Solder.—F. S. & Co.'s mak Best Fine	P.		200
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Solder, -F. S. & Co.'s mak Best Fine	P.		33c to 35c
Solder.—F. S. & Co.'s mak Best Fine	P.		33c to 35c
Solder.—F. S. & Co. 's mak Best Fine	P.		33c to 35c 
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Solder.—F. S. & Co.'s mak Reat Fine No. 1 Roofing Braziers' or Speiter Soldel Antimony. Bubbit Metal—F. S. & 6 No. 2. Sheet Iron.—	P.		32c to 35c
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Solder.—F. S. & Co.'s mak Reat Fine No. 1 Roofing Brazlers' or Spelter Soldel Antimony. Bubbit Metal—F. S. & 6 No. 2. Sheet Iron.—	P.		32c to 35c
Solder.—F. S. & Co.'s mak Reat Fine No. 1 Roofing Brazlers' or Spelter Soldel Antimony. Bubbit Metal—F. S. & 6 No. 2. Sheet Iron.—	P.		32c to 35c
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Solder. F. S. & Co.'s make	00.8		32c to 35c
Solder. F. S. & Co.'s make	mooth. Com. 6 c 6%c 6)4c	Smooth Charcoal, 74c 8 c	90c 184 184 to 354 164 165 144 Smooth Juniata 9%c 9%c 10 c dis 25 t
Solder.—F. S. & Co.'s mak Best Fine. No. 1. Roofing. Brazlers' or Sociter Solde Antimony. Bubbit Metal—F. S. & C No. 2.  Common. No. 24.  25. & 26.  54.  Galvanized Iron. No. 16 to 20. 12 to 24. 18 to 25.  Russia Iron.  Russia Iron.  10 25.	mooth. Com. 6 c c 64c 54c No. 27	Smooth Charconi, 7%c 7%c 8 c	32c to 35c 16c 16c 16c 16c 16c 16c 16c 16c 16c 16
Solder.—F. S. & Co.'s mak Best Fine. No. 1. Roofing. Brazlers' or Sociter Solde Antimony. Bubbit Metal—F. S. & C No. 2.  Common. No. 24.  25. & 26.  54.  Galvanized Iron. No. 16 to 20. 12 to 24. 18 to 25.  Russia Iron.  Russia Iron.  10 25.	mooth. Com. 6 c c 64c 54c No. 27	Smooth Charconi, 7%c 7%c 8 c	32c to 35c 16c 16c 16c 16c 16c 16c 16c 16c 16c 16
Solder.—F. S. & Co.'s mak Best Fine. No. 1. Roofing. Brazlers' or Sociter Solde Antimony. Bubbit Metal—F. S. & C No. 2.  Common. No. 24.  25. & 26.  54.  Galvanized Iron. No. 16 to 20. 12 to 24. 18 to 25.  Russia Iron.  Russia Iron.  10 25.	mooth. Com. 6 c c 64c 54c No. 27	Smooth Charconi, 7%c 7%c 8 c	32c to 35c 16c 16c 16c 16c 16c 16c 16c 16c 16c 16
Solder. F. S. & Co.'s make	0. %	Smooth Charcoal. 7½c 7½c 8 c	30c to 35c 18c to 35c 16c to
Solder. F. S. & Co.'s make	0. %	Smooth Charcoal. 7½c 7½c 8 c	30c to 35c 18c to 35c 16c to
Solder. F. S. & Co.'s make	0. %	Smooth Charcoal. 7½c 7½c 8 c	30c to 35c 18c to 35c 16c to
Solder	mooth. Com. 6 c c 6 kc 6 kc 6 kc 6 kc 8 No. 27 8 No. 1 Sh B. In she Lead F Lead F	Smooth Charcoal, 745c 74c 8 c tained eets, 1c. hip ets, 1c high ipe, in full ipe, when Lead.	20c
Solder. F. S. & Co.'s make	mooth. Com. 6 c c 6%c 6%c 6%c 10%c 10%c 10%c 10%c 10%c 10%c 10%c 10	Smooth Charcoal. 7½c 7½c 8 c tained tained tained tained tained ipp. in full ipp. the full ipp. when Lead.	20c
Solder	mooth. Com. 6 c c 6%c 6%c 6%c 10%c 10%c 10%c 10%c 10%c 10%c 10%c 10	Smooth Charcoal. 7½c 7½c 8 c tained tained tained tained tained ipp. in full ipp. the full ipp. when Lead.	20c

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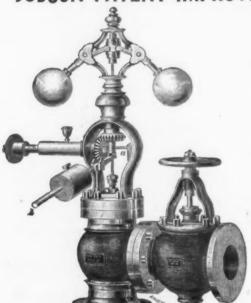
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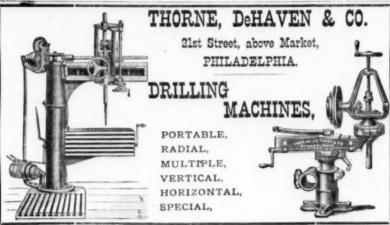
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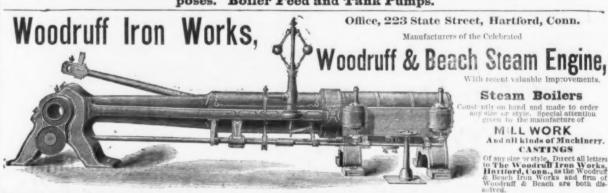
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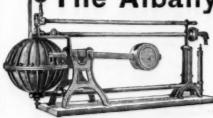


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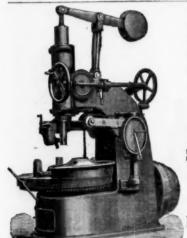
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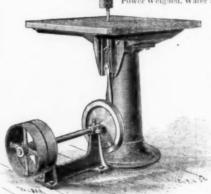
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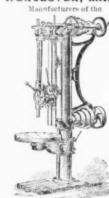
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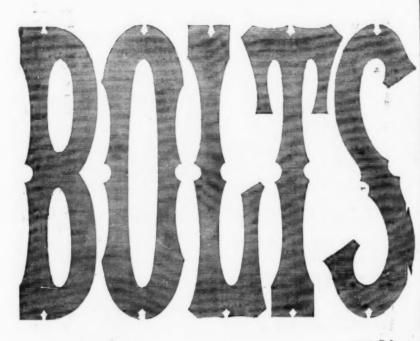
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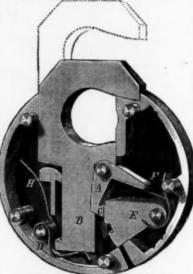
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